

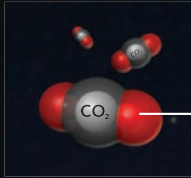
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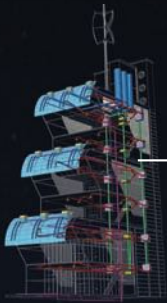
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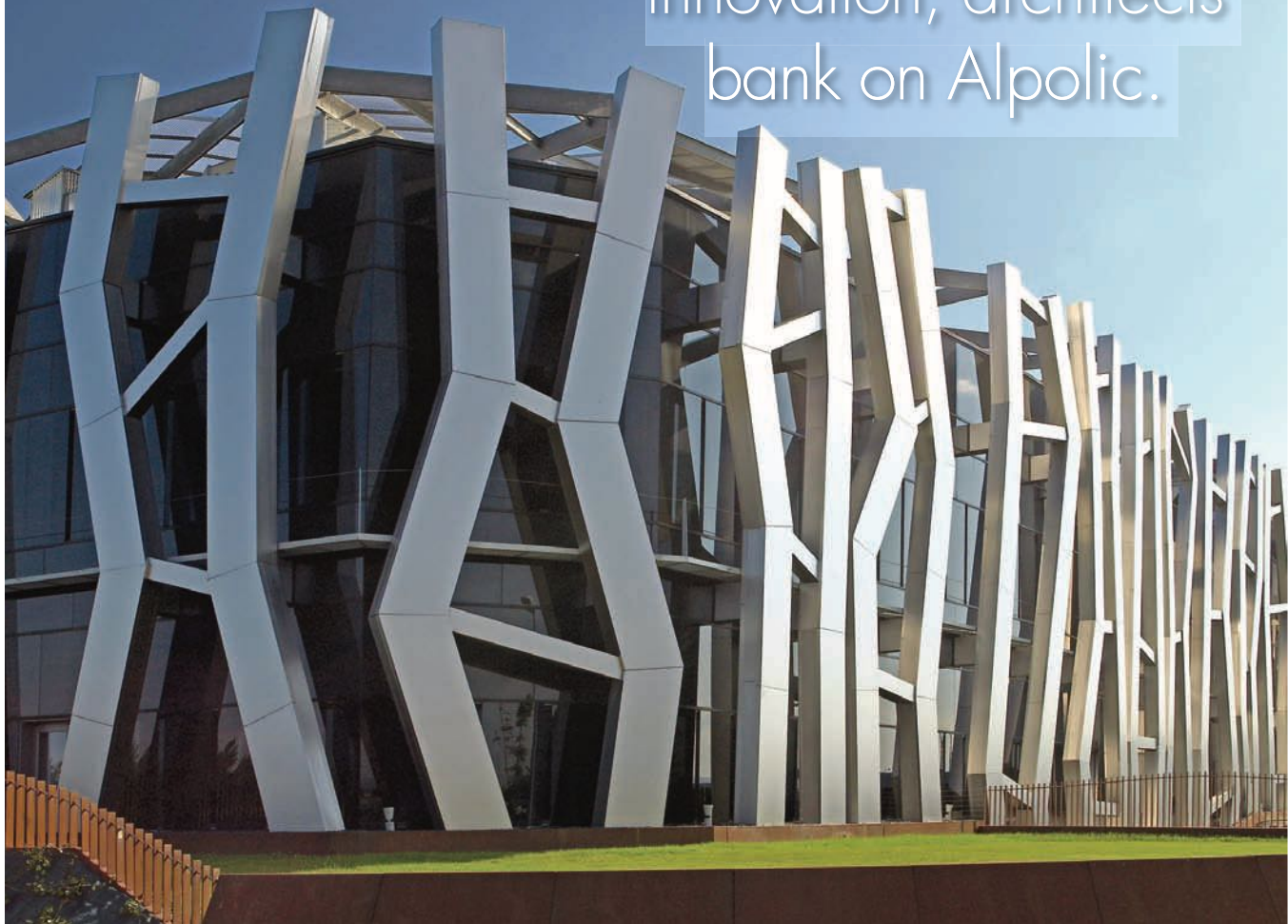
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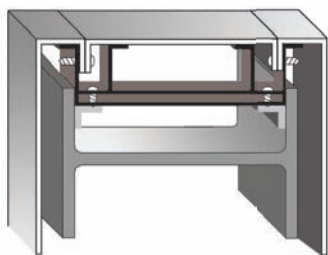
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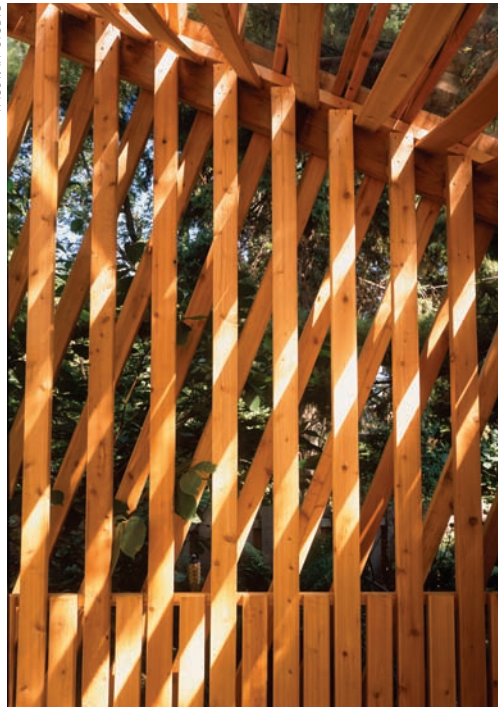
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22 2009 ROYAL ARCHITECTURAL INSTITUTE OF CANADA AWARDS OF EXCELLENCE

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JAMES DOW



17 NEWS

Ought Apartment architectural installation at the Vancouver Art Gallery; Switzerland's Peter Zumthor takes the 2009 Pritzker Architecture Prize.

58 INSITES

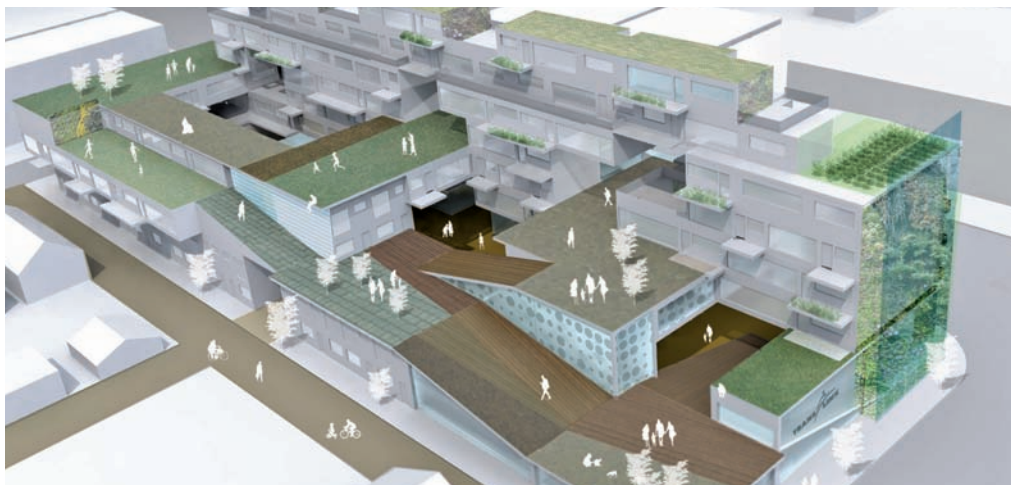
Ioana Teodorescu takes a historical perspective in examining the CMHC's flawed efforts in securing architect-designed house plans to address Canada's growing population.

65 CALENDAR

architecture e+c: work of elin + carmen corneil 1958 to 2008 at the University of Toronto's Eric Arthur Gallery; 10th World Congress on Art Deco at McGill University.

66 BACKPAGE

The inventor of a sandbagging device meets great success in mitigating the damaging effects of flooding in North America.



ABOVE CALGARY-BASED STURGESS ARCHITECTURE WON A FIRST-PLACE PRIZE IN FORMSHIFT VANCOUVER, AN IDEAS COMPETITION ABOUT INTENSIFYING THE CITY AND MAKING IT MORE SUSTAINABLE.

In early April, I had the opportunity to be part of a jury for an ideas competition called FormShift Vancouver. This design competition, co-hosted by the Architectural Institute of British Columbia and the City of Vancouver, invited architects, designers and interested members of the public to submit speculative design proposals to improve Vancouver's livability quotient. Entrants were encouraged to respond to a series of documents and guidelines that the City of Vancouver has recently adopted, such as the Climate Change Action Plan, the EcoDensity Charter, and the Architecture 2030 Challenge to reduce carbon emissions. The competition received 84 submissions, and it was inspiring to review such a large number of thought-provoking designs that will hopefully lead to innovative projects in the city. After the most recent building boom came to an end last fall, many people were left with the impression that Vancouver had produced precious few examples of innovative architecture and urbanism beyond the Vancouver Convention Centre or the lacklustre Olympic Village—albeit one that is built to LEED Gold standards.

The FormShift deliberations were guided by City of Vancouver Director of Planning Brent Toderian. The other members of the jury included Nancy Knight, Vice President Campus and Community Planning at the University of British Columbia; Walter Francel of Walter Francel Architecture Inc.; Vancouver-based photographic artist Stan Douglas; and myself. Francel acted as the competition's professional advisor.

The submissions identified many important issues that Vancouver must address over the next 10 to 20 years—district energy, laneway housing, urban agriculture, alternative forms of land ownership, prefabricated construction, and a host of green-roof technologies. Not surprisingly, the majority of the FormShift entries focused on intensifying the city's laneways, an urban system

that is so much a part of the Vancouver experience. But it was disappointing that so few submissions convincingly supported incentives for private developers to effectively implement district energy programs, to facilitate the production and sale of locally grown produce, and to keep the cost of laneway housing affordable—despite the fact that laneway housing in Vancouver has been widely discussed for over 30 years.

To his credit, Toderian's FormShift Vancouver initiative was intended, in part, to further the City's studies pertaining to laneway housing as a solution to an ongoing rental crisis and the need to create more housing that is affordable to the average Vancouverite. Toderian, who manages his own blog on Planetizen.com, is neither short on self-promotion nor on words attesting to his enthusiasm for his adopted city. Having flourished under the direction of Larry Beasley for roughly 20 years, Vancouver's planning department was handed over to Toderian in 2006, where it has since struggled to develop a vision beyond hype, to keep pace with seasoned developers, and to embrace the creativity of BC's architects.

There is certainly a market ready to adopt laneway housing. And there are companies which can produce modular homes within the current 1.5-storey 600-square-foot limitations. Even more housing options will become available if Toderian and his staff can push those limitations to two storeys and 750 square feet, suggested dimensions that have been discussed in the local design community. Improving guidelines for laneway housing will not contribute to a city as radical as the schemes proposed in FormShift, but Toderian's team must work strategically and apply the scenarios presented in the competition to make Vancouver truly equal to its reputation as a pre-eminent city.

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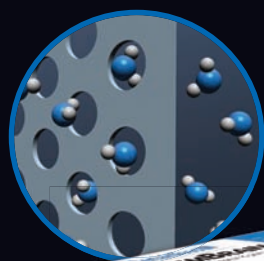
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PROJECTS

Ought Apartment at the Vancouver Art Gallery.

Reece Terris has built a 60-foot architectural installation straight up through the heart of the Vancouver Art Gallery. Focusing on the evolution of domestic space in Vancouver over the last six decades, *Ought Apartment* is an “apartment tower” with six full-sized residences stacked on top of each other, each dedicated to a decade of décor between 1950 and 2000. The largest sculptural installation ever created at the museum will be on display until September 20, 2009. Each floor of Terris’s *Ought Apartment* reflects the floor plan of a particular decade, beginning with the 1950s on the first floor and ending with the present decade on the sixth. As the installation rises through the gallery’s rotunda, the floor plans evolve, reflecting shifting social values and the progression of interior design over time, while drawing attention to the economy of obsolescence that drives the process of home renovation. Cabinetry, tilework, bathroom fixtures, linoleum floors, wallpaper, appliances, lamps, furniture and a myriad of other domestic artifacts were carefully removed from residences slated for demolition or renovation for reconfiguration in Terris’s sculpture. The artist salvages these rapidly vanishing domestic objects to emphasize their cultural value, as well as the ongoing cycles of human consumption. Each floor of the installation is cross-sectioned to allow intimate views through walls and ceilings into the meticulously decorated interior spaces. Over the past four years, Vancouver-based Terris has undertaken a set of ambitious sculptural projects that address constructed space in the contemporary environment. Drawn to both architecture and visual art, Terris studied at Simon Fraser University, where he explored the possibilities of three-dimensional design, while actively maintaining a construction business and exhibiting work. *Reece Terris: Ought Apartment* is organized by the Vancouver Art Gallery and curated by Grant Arnold, Audain Curator of British Columbia Art. The installation is the ninth work presented as a part of *NEXT: a series of artist projects from the Pacific Rim*. www.vanartgallery.bc.ca

AWARDS

Peter Zumthor of Switzerland named the 2009 Pritzker Architecture Prize Laureate.

Peter Zumthor of Switzerland has been chosen as the 2009 Laureate of the Pritzker Architecture Prize. The formal ceremony for what has come to be known throughout the world as architecture’s highest honour will be held on May 29 in Buenos



ABOVE REECE TERRIS'S SIX-STORY OUGHT APARTMENT INSTALLATION AT THE VANCOUVER ART GALLERY REVEALS OUR CULTURE'S OBSESSION WITH INTERIOR DESIGN AND RENOVATION, AND THE ECONOMY OF OBSOLESCENCE THAT DRIVES THE PROCESS OF HOME RENO.

Aires, Argentina. At that time, a \$100,000 grant and a bronze medallion will be bestowed on the 65-year-old architect. Although most of his work is in Switzerland, he has designed projects in Germany, Austria, The Netherlands, England, Spain, Norway, Finland and the United States. His most famous work is in Vals, Switzerland—the Thermal Baths, which has been referred to by the press as “his masterpiece.” In Zumthor’s own words as expressed in his book, *Thinking Architecture*, “In a society that celebrates the inessential, architecture can put up a resistance, counteract the waste of forms and meanings, and speak its own language. I believe that the language of architecture is not a question of a specific style. Every building is built for a specific use in a specific place and for a specific society.” The Zumthor choice marks the second time in three decades of the Pritzker Architecture Prize that Switzerland has provided the laureate. In 2001, Jacques Herzog and Pierre de Meuron were the honourees. www.pritzkerprize.org

Raymond Moriyama announced as one of nine laureates of the Governor General’s Awards in Visual and Media Arts.

The Canada Council for the Arts recently announced the names of the nine laureates of the 2009 Governor General’s Awards in Visual and

Media Arts at the National Gallery of Canada. This year is the 10th anniversary of these prestigious awards. Receiving awards for artistic achievement are the following: architect Raymond Moriyama; sculpture artist John Greer; sculptor, musician, and performer Nobuo Kubota; interdisciplinary artist Rita McKeough; filmmaker Robert Morin; and painter Gordon Smith. Glass sculptor Kevin Lockau will receive the Saidye Bronfman Award for excellence in the fine crafts, while Tony Urquhart and Kim Ondaatje will share the outstanding contribution award for their work in establishing CARFAC, the Canadian Artists’ Representation/Le Front des artistes canadiens, the national voice of Canada’s professional visual artists. The awards recognize distinguished career achievements in the visual and media arts by Canadian artists, as well as outstanding contributions to the visual and media arts through voluntarism, philanthropy, board governance, community outreach or professional activities. Moriyama is known for buildings that balance harmoniously with the landscape and which encourage civic engagement. He has received numerous awards, including an Honorary Fellowship in the American Institute of Architects, a Royal Architectural Institute of Canada Gold Medal (1997), and a Companion of the Order of Canada (2008).

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Benjamin Moore HUE Awards.

In its fourth year, the Benjamin Moore HUE Awards—which recognize exceptional use of colour in architecture and interior design—will be accepting submissions until October 9, 2009. There is no fee to enter, and downloadable entry forms and instructions are available only at www.benjaminmoore.ca. Since establishing the HUE Awards in 2005, Benjamin Moore has presented nearly \$100,000 in prize money to design professionals in categories that include Residential Interiors, Residential Exteriors, Contract Interiors, Contract Exteriors, Social Responsibility and Lifetime Achievement. The program seeks to honour the incorporation of colour in innovative and imaginative ways—through the use of interior and exterior paints, building materials, textiles and other surfaces, plus design elements and furnishings. In addition to a \$5,000 cash prize, each honouree also receives a HUEY mouth-blown crystal sculpture. hueawards@veederperman.com

University of Manitoba student winners of TD Eco Award receive \$25,000 cheque.

In March, three University of Manitoba master's students in city planning received a cheque for \$25,000 from the TD Friends of the Environment Foundation for a proposal they wrote on urban sustainability. Students Chris Baker, Kaeley

Wiseman, and Richard Mahé were one of four Canadian university teams to win TD's \$100,000 Go Green Challenge. Their submission is entitled "New Ways to Look at Old Spaces: A Vision for Green Infrastructure Networks" and proposes how single-use spaces in cities such as railways and hydro-line corridors can also be used as green space, including community gardens, wildlife habitats and bike paths. As part of their proposal, the students undertook a case study on the Bishop Grandin Greenway (BGG), a community organization that formed partnerships with the City of Winnipeg and Manitoba Hydro to build a greenway along the corridor. www.td.com/jef/

COMPETITIONS

Three Montreal designers win first prize in the Lighting Up the Gesù Competition.

Three Montreal designers have won first prize in the ideas competition for the illumination of the Gesù façade for their sensitive proposal entitled *Rencontre sur les marches de l'église*. Organized by the Quartier des spectacles Partnership, the Gesù and the City of Montreal's Design Montréal agency, the competition drew 37 entries from three continents. Evoking the soft and fragile glow of candlelight, the entry from BCK design, a firm founded by UQAM environmental design

graduates Mathieu Koch, David-Alexandre Côté and Steve Blanchette, captured the attention of the jury who awarded the three designers the \$10,000 first prize. The \$5,000 second prize went to Martin Labrecque and Jean Laurin, both Montreal-based lighting designers, for their submission *Deux mondes, un lieu*. New York architects James Long and Athena N. Anders won the \$3,000 third prize for *Light Shadow Dream*. Interestingly, the results of the public vote were generally in accordance with the choices of the jury. From the six submissions that received the most votes, the \$2,000 People's Choice Award went to Jonathan Barro and Stéphane Caissy of Montreal, the creators of *Gesù architectural*.

2009 Central Glass International Architectural Design Competition.

This open competition asks applicants to propose community gathering spaces that meet the requirements of specific places, scales, and mechanisms. The following must be included with each application: floor plan, cross section, site plan (at any scale), and perspective diagram or photo of model. Applicants are free to add charts, diagrams and descriptive text to help describe their proposals. One first-place prize of 2,000,000 yen + gift will be given, and two second-place prizes of 300,000 yen + gift will be issued. Four honourable mention prizes of 100,000 yen + gift will be



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given, along with 10 special prizes of 50,000 yen each. The submission deadline is August 3, 2009, and final screenings will be held on October 31, 2009. Winners will be announced on December 2009. The jury is comprised of: Toyo Ito, Masaru Okamoto, Riken Yamamoto, Kiyoshi Sakurai, Taro Ashihara, Kengo Kuma and Kunito Takahashi.
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WHAT'S NEW

Call for articles for On Site 22.

On Site would like proposals for articles, notes, photographs, interviews, projects on the subject of architecture in its widest interpretation and war, in its widest effects. Have a think about war and all the ways it shows materially in buildings, landscapes, cities. The deadline for proposals is July 1, 2009 and the deadline for finished articles is August 15, 2009. Texts should be 800-1,000 words or fewer.

editor@onsitereview.ca

Discover Toronto for free with ROMwalks.

Lace up your shoes and discover the architecture, history and stories of Toronto through ROMwalks, a series of free guided walking tours of the city. Every year, from May to October, tour leaders from the Royal Ontario Museum's (ROM) Department of Museum Volunteers guide the

public through some of the city's most distinctive neighbourhoods, visiting Toronto landmarks and illuminating their architectural and historical significance. This year, 13 different walks will be featured. Walks take place Sundays at 2:00pm and Wednesdays at 6:00pm with a duration of one-and-a-half hours to two hours. Tours are free to the public and registration is not required, with the exception of private group walks and ROMwalks PLUS.

www.rom.on.ca/programs/rom_travel/index.php

Richard Sommer appointed as Dean, John H. Daniels Faculty of Architecture, Landscape and Design at the University of Toronto.

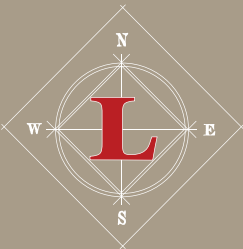
The University of Toronto has announced the appointment of Professor Richard Sommer as Dean, John H. Daniels Faculty of Architecture, Landscape and Design, effective July 1, 2009 and ending June 30, 2014. Professor Sommer is currently a member of the faculty at Harvard University's Graduate School of Design. For the past six years, he has also served as Director of Harvard's Urban Design Program, and for the past four years, Sommer has been a Visiting American Scholar and the O'Hare Chair in Design and Development at the University of Ulster, Northern Ireland. He has held a number of other notable academic appointments, including serving as the Scholar-in-Residence at the

California College of Arts in San Francisco from 1995 to 1998. Sommer's writings and projects have been published in several magazines and journals, and he has received a great deal of support for his research in the form of numerous awards and grants.

Ryerson University team to build school in Ghana.

A group of Ryerson University students is preparing to embark on an adventure that incorporates a school-building mission in Ghana. Led by Ryerson's Department of Architectural Science, a multidisciplinary team of 25 undergraduate students, three professors and two recent Ryerson alumni will travel to the village of Kpedze Todze in Ghana throughout the month of May to establish a pre-school/kindergarten facility for approximately 50 local children. The Ryerson group, encompassing Architecture, Interior Design, Early Childhood Education, Fashion, and Image Arts, will assess the existing educational site and building, and then design, construct and furnish a new facility. "With a relatively high literacy rate, low violence and good health care, Ghana is a success story in Sub-Saharan Africa," said Ian MacBurnie, Associate Professor in the Department of Architectural Science and Head of the Ghana Project.

<http://ghanaschooldesign.blogspot.com>



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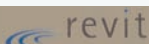


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SAUCIER + PERROTTE ARCHITECTES

SAUCIER + PERROTTE ARCHITECTES



OLIVIER BLOUIN

Founded in 1988 by Gilles Saucier and André Perrotte, Saucier + Perrotte architectes has gained international renown for its institutional, cultural, and residential projects. The firm represented Canada at the prestigious Architecture Biennale of Venice in 2004, and has been honoured with numerous awards, including five Governor General's Medals in Architecture. Saucier + Perrotte's highly acclaimed buildings have been published the world over, reflecting the office's status as one of Canada's premier design firms. While continuing to add to its body of significant built work in Quebec and Ontario, the firm is also currently working in Alberta and Malaysia. In addition, Saucier + Perrotte has designed projects in Japan, China, and the Middle East.

Located in the heart of Montreal's Little Italy, Saucier + Perrotte architectes occupies a 60-year-old industrial building converted by the firm. The partners are proud to be part of the

renewal of this area of the city. Recent S+P projects that have garnered top awards include the Communication, Culture and Technology Building (University of Toronto at Mississauga), which received the 2008 Governor General's Medal in Architecture, a 2007 Award of Excellence from the Ontario Association of Architects (OAA), and the Ordre des architectes du Québec (OAQ); the Perimeter Institute for Theoretical Physics (Waterloo, Ontario), honoured with the 2006 Governor General's Medal in Architecture, and both an OAA and OAQ Award of Excellence in 2005; the new Schulich School of Music Building (McGill University); the New College Student Residence (University of Toronto), which received a *Canadian Architect* Award of Excellence; the First Nations Exhibition Pavilion in Montreal, also a recipient of a Governor General's Medal in Architecture, a *Canadian Architect* Award of Excellence, and an OAQ Award of Excellence; the School of Architecture and

ABOVE, LEFT TO RIGHT CONSTRUCTED OF PAINTED METAL, THE INTERPRETIVE MODEL OF THE CANADIAN MUSEUM FOR HUMAN RIGHTS WAS PART OF THE *FOUND OBJECTS* EXHIBITION BY SAUCIER + PERROTTE FOR THE 2004 BIENNALE OF ARCHITECTURE; INSIDE THE MONTREAL OFFICES OF SAUCIER + PERROTTE ARCHITECTES.

Design for the Université de Montréal; Gérard-Godin College in Ste-Geneviève, whose prizes include the OAQ Grand Prix d'Excellence; a hotel for the Orford Arts Centre; the Canadian Embassy in Abu Dhabi; Michel Brisson men's store in Old Montreal; and Boutique Philippe Dubuc.

Ongoing major projects include River City, a 1,000-unit, 3.8-acre LEED Gold master plan in Toronto's industrial West Don Lands; the new Science and Technology Building for John Abbott College in Ste-Anne-de-Bellevue; a hotel tower in Kuching, Malaysia; the National Mountain Centre Museum and Climbing Facility in Can-



SAUCIER + PERROTTE ARCHITECTES



MARC CRAMER



MARC CRAMER

TOP A LARGE PHOTOGRAPH OF QUEBEC'S KAMOURASKA REGION HANGS IN THE OFFICES OF S+P FOR CREATIVE INSPIRATION. IT IS REMINISCENT OF SAUCIER'S OWN CHILDHOOD MEMORIES OF THE AREA. **ABOVE, LEFT TO RIGHT** DRAMATIC AND REFINED DETAILING IS EVIDENT THROUGHOUT THIS MENSWEAR STORE (2007), OPERATED BY MONTREAL CLOTHIER MICHEL BRISSON; THE FLAGSHIP STORE FOR MONTREAL CLOTHING DESIGNER PHILIPPE DUBUC (2006).

more, Alberta; and the Centre de Villégiature Montcalm, a 70-room hotel in Quebec's Lanaudière region.

Throughout the firm's history, Gilles Saucier and André Perrotte have recognized the importance of education and have been involved in lecturing and teaching locally and abroad. This year, Saucier has lectured at the AIA San Francisco and for the Séminaire international Phyllis Lambert at the Université de Montréal, and

Perrotte spoke in July 2008 at the Annual Conference of the Society of College and University Planning. Past lecture series for S+P have included talks at several universities, the New York Architectural League, and the Royal Ontario Museum. Notably, Saucier was one of three architects in Canada invited to accompany the Governor General's team to promote Canadian culture through a series of state visits to Finland and Iceland. In addition to the 2004 Architecture Biennale in Venice, Saucier + Perrotte has previously been part of three important exhibitions: *Les lieux de la couleur*, presented at the Canadian Centre for Architecture (CCA) in 2000, *Childhood Landscapes/Topographical Unfoldings*, presented in Montreal, Toronto, Ottawa, and Buffalo between 2002 and 2004, and more recently, *Substance Over Spectacle* in Vancouver (2005).

In 2002, the Canadian Centre for Architecture (CCA) began archiving architectural drawings and models by Saucier + Perrotte, and in 2007,

they selected the firm to design its exhibition on the oil crisis of the 1970s, entitled *1973: Sorry, Out of Gas*.

Saucier + Perrotte is regularly invited to participate in major international competitions and has been a finalist in several in recent years. The firm won the prestigious competition for the Bank Street Building on Parliament Hill in Ottawa and was shortlisted for the design of the Grande Bibliothèque du Québec, the new Montreal Cultural and Administrative Complex, the Canadian Museum for Human Rights in Winnipeg, and the AIST African Institute of Science and Technology International Competition in Nigeria. Saucier + Perrotte also recently worked on the design of a new 2,300-seat permanent theatre for the Cirque du Soleil in Tokyo.

Gilles Saucier received his diploma in architecture from the University of Laval (B.Arch. in 1982). After working at Cayouette Saia in the 1980s with André Perrotte, he founded Saucier +



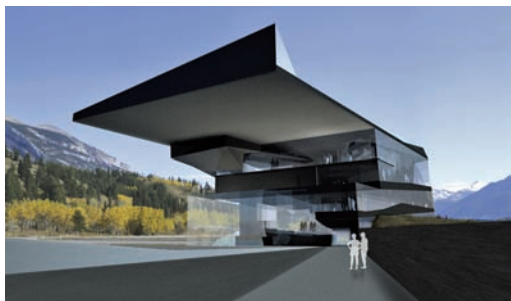
ABOVE, LEFT TO RIGHT COMPLETED DURING MONTREAL'S RECESSION OF THE 1990S, THE CINÉMATHEQUE QUÉBÉCOISE (1997) INTRODUCES SOME OF THE FIRM'S UNIQUE TREATMENT OF STEEL-AND-GLASS DETAILING; INSPIRED BY THE ADJACENT TREE CANOPY, THE FIRST NATIONS GARDEN PAVILION AT THE MONTREAL BOTANICAL GARDEN (2001) MARKS ONE OF MANY TURNING POINTS IN THE FIRM'S FINE BALANCE OF LANDSCAPE AND BUILDING; S+P WAS A FINALIST IN THE INFAMOUS DESIGN COMPETITION FOR THE CANADIAN MUSEUM FOR HUMAN RIGHTS IN WINNIPEG (2005). **LEFT** DESIGNED IN COLLABORATION WITH DMA, GÉRALD-GODIN COLLEGE (1999) REPRESENTS A SIGNIFICANT ADVANCEMENT IN S+P'S ABILITY TO WORK WITH EXPRESSIVE CURTAIN WALLS. **BOTTOM LEFT** THE ICONIC SOUTH FAÇADE OF THE PERIMETER INSTITUTE FOR THEORETICAL PHYSICS IN WATERLOO, ONTARIO (2004).



Perrotte architectes with Perrotte in 1988. Since 1990, he has been a visiting professor and an invited critic at several Canadian and American universities, including the Université de Montréal, McGill University, the University of Toronto, the University of British Columbia, and Seattle University. As design partner, he is responsible for the overall design of each project, ensuring that the team responds to all design criteria. His commitment to design excellence is well recognized by the architectural press worldwide. Additionally, his work as a photographer has fine-tuned his approach to architecture and has helped evolve his perspective on the world and his work.

Along with Saucier, André Perrotte studied architecture at Laval University in Quebec City, graduating the same year. Co-founding the firm in 1988, Perrotte's role is as project architect, in charge of the co-ordination of each step of the design and construction process, and in charge of the administrative management of each client. In conjunction with Saucier, he is involved in the design of every project, and directs the flow of information between all parties involved in the design process.

Perrotte possesses a vast field of expertise, mainly in managing multidisciplinary teams from control to production, costs to schedules,



CLOCKWISE FROM TOP LEFT THE PROPOSAL FOR THE NATIONAL MOUNTAIN CENTRE IN CANMORE, ALBERTA WAS DESIGNED BY SAUCIER + PERROTTE ARCHITECTES IN COLLABORATION WITH MARC BOUTIN ARCHITECTS; THE NEW BUILDING FOR THE SCHULICH SCHOOL OF MUSIC AT MCGILL UNIVERSITY (2005) IN MONTREAL; THE REFLECTIVE FAÇADE OF THE COMMUNICATION, CULTURE AND TECHNOLOGY BUILDING AT THE UNIVERSITY OF TORONTO AT MISSISSAUGA (2004).

and techniques to construction systems. He is widely recognized for the rigour and creativity of his approach towards construction as an expression of contemporary culture.

Since 1989, Perrotte has taught architecture and has been a visiting critic at several Canadian universities, including the Université de Montréal, the University of Waterloo, the University of Toronto, McGill University, and UQAM (Université du Québec à Montréal).

The work of Saucier + Perrotte varies in scope and scale as the firm believes that the architectural process can touch all aspects of design intervention—from master planning to the redevelopment of heritage projects, from single-family homes to sustainably designed dwelling complexes, from museums and theatres to interiors and exhibition spaces. The office enjoys working through a collaborative process in designing progressive, future-oriented buildings, bringing together architectonic notions with social, cultural, and topographic juxtapositions.

Since its inception, Saucier + Perrotte has integrally linked its architecture to the landscape—to the evolving topography of each site it addresses. Every commission stresses the specific physical and symbolic importance of each project's site and is a reflection of the firm's understanding of architecture's role in shaping the contemporary city and the rural landscape. Saucier + Perrotte seeks out creative design solutions, bringing together notions of discovery and learning, providing users and visitors with a new perspective of what architecture can be and introducing new ways of perceiving the world

around them.

S+P believes in architecture's inherent potential to play a positive role as an instrument of progress within an institution and its community. To the firm, an architectural design concept must play an important role in expressing the positive cultural values represented by a client, institution, or community. The work undertaken by the firm is done with the goal of providing a design that brings to fruition the goals of clients while producing architecture that contributes to a better world.

Promoting exchange and encouraging discourse are underlying principles that are found in the designs of the recently completed cultural and educational projects including the Communication, Culture and Technology Building for the University of Toronto at Mississauga (2008), recipient of the Governor General's Medal in Architecture, and likewise at the new state-of-the-art building for the School of Music at McGill University, considered to be one of the world's pre-eminent facilities for sound technology and recording. These projects are based on the creation of an environment of open communication amongst all the building's users—professors, researchers, students and visitors alike.

The design for the Perimeter Institute for Theoretical Physics in Waterloo, Ontario (2008), recipient of an International Architecture Award and the 2006 winner of the Governor General's Medal in Architecture, is planned around the idea of users creating meeting spaces that generate informal discourse. The Taylor Family Digital Library for the University of Calgary campus is

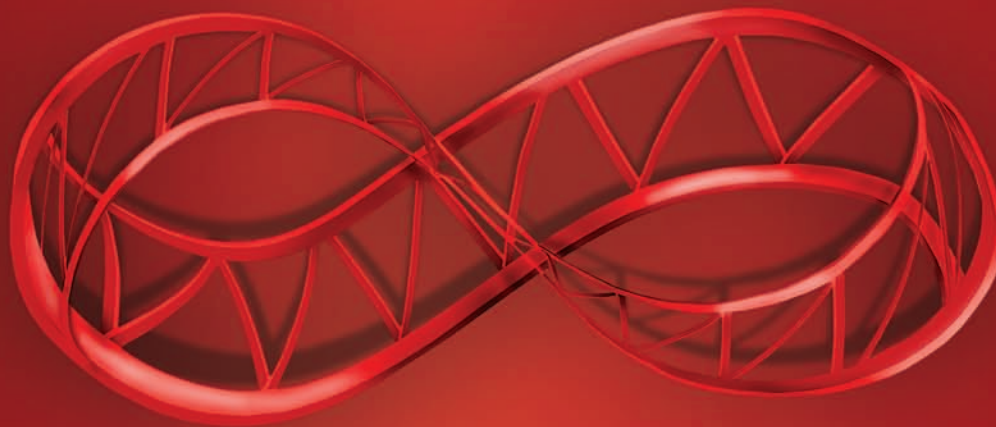
also a key project for Saucier + Perrotte in which the firm pushed the boundaries of what libraries can be, incorporating the latest in digital technologies as well as an art museum. Other projects featuring museum and gallery design include the renowned Cinémathèque Québécoise (a film and media museum in Montreal), the widely acclaimed Canadian Museum for Human Rights proposal for Winnipeg, the National Mountain Centre in Alberta, the Faculty of Design and Planning for the Université de Montréal, and the First Nations Garden Pavilion.

Saucier + Perrotte is excited by each challenge it faces, whether dealing with master planning or a redevelopment of both industrial and historic settings. The firm is currently engaged in a 1,000-unit sustainable housing development in the West Don Lands of Toronto, a waterfront area with a long industrial past. This is an extremely engaging design exercise as it brings new life to an area that was empty for many years. Moreover, interventions such as this one by Saucier + Perrotte have often been met with critical and client acclaim, even in competitions. Some of these include a new master plan proposal for the University of Toronto Faculty of Law Precinct; the master plan competition for the campus of the African Institute for Science and Technology (AIST) in Abuja, Nigeria; the Khandama Development in Mecca, Saudi Arabia; and the Silo #5 industrial redevelopment along Montreal's Old Port.

While Saucier + Perrotte is committed to sustainable design, it is also committed to architectural creativity and innovation. Often, design that is so focused on achieving green design innovation neglects the creative process that leads to great architecture. The S+P team shares the understanding that the best solutions are developed through creativity and design innovation. The design-oriented team works to define new synergistic relationships between sustainability and architectural excellence to the extent where they become integrated and indistinguishable from one another.

Jury Comments

The quality of the work of Saucier + Perrotte architectes and their commitment to excellence were the major determinants in our choice of the firm as award recipients. Their work explores many different themes—light and material, landscape and architecture, abstraction and occupation. The firm has pursued and achieved poetics of space in architecture, and as a result, has represented Canada abroad in publications and exhibitions like the Venice Biennale.



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VINCE KLASSEN

DOCKSIDE GREEN SYNERGY



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Synergy is the highest-scoring LEED Platinum project in the world, and Dockside Green is the largest development of city land in Victoria's history. Once complete, the development will total 26 buildings and include residential, live/work, hotel, retail, office, light industrial uses and numerous public amenities. With a LEED

Platinum rating targeted for each building, the project is a global showcase for large-scale sustainable development. The first phase of Dockside—known as Synergy—is the highest-scoring LEED Platinum-certified project on record. It includes four detached buildings: a nine-storey and a six-storey residential tower

LEFT THE SYNERGY PHASE OF DOCKSIDE GREEN IS A TEXTBOOK EXAMPLE OF INTEGRATING A HOST OF SUSTAINABLE DESIGN PRINCIPLES INTO A MIXED-USED DEVELOPMENT.

with commercial units on the ground floor, and a two-storey and four-storey residential building with townhouses.

The design team completed the master plan for the 15-acre mixed-use Dockside Green development in 2005. Following a Triple Bottom Line philosophy—which examines the social, economic and environmental consequences of development—the design team created a vision of a socially vibrant, ecologically restorative, economically sound and just community that raises the bar for large-scale urban design and planning.

Dockside's sustainable strategies stand out because of their site-wide application. The project is employing an integrated energy system that ensures the development will be greenhouse gas-neutral, while also providing the opportunity for the project to become a net-energy provider. Dockside's additional site-wide systems include: a biomass gasification plant that converts locally sourced wood waste into clean-burning gas to produce heat and hot water; a blackwater strategy that treats 100 percent of all sewage from the development at the on-site Waste Water Treatment Facility; and an extensive greywater treatment strategy that is expected to save more than six million litres of water annually.

A few of the project's green features include dual-flush toilets and low-flow fixtures to reduce potable water use by 67 percent, and low-VOC adhesives, paints and coatings to improve indoor air quality. The project also promotes sustainability and raises public awareness through site tours and on-site signage.

In an effort to reduce car use, Dockside is located within easy walking distance to downtown Victoria, area amenities and public transportation. Dockside also offers residents a car co-op with a Smart Car and provides ample bicycle storage and change rooms. Green roofs are used extensively in the development. They provide residents with amenity spaces and garden plots to grow fruit, vegetables and flowers. Green roofs also benefit the environment by reducing storm-water runoff and the urban heat-island effect. Energy-efficient lighting fixtures throughout the project, together with interior occupancy sensors, reduce energy consumption. Additional energy-saving features include Energy Star appliances, heat recovery ventilation units, low-E double-glazed windows and exterior blinds on the south and west faces of each building. The

project uses rainwater leaders to direct building runoff to the central greenway, and stormwater runoff cascades along pathways en route to the greenway. Exterior lighting includes low-level and full cutoff lighting.

Dockside is oriented around a central greenway that runs parallel to the shoreline. Made up of a series of water ponds and bioswales, the greenway is a key feature in the development's water management system. Site stormwater flows from the buildings and ground-level concourses to the greenway where it is filtered, along with treated blackwater from the Waste Water Treatment Facility, for greywater use in toilets and irrigation. Dockside's greenway also enhances the community's livability by providing significant public open space.

Dockside is expected to become the first LEED Platinum community in the world; it was also the first community development to apply for participation in the LEED for Neighbourhood Development pilot program.

Jury Comments

Dockside Green integrates innovation in various aspects into an outstanding architecture which creates exciting "synergies." Aside from the LEED Platinum rating, Dockside Green addresses issues such as traffic, biodiversity, microclimate, etc. All three aspects of sustainability (social, economic and environmental) have been addressed. Efforts to create a vibrant community—such as public walkways between the buildings—distinguish the project from many other urban developments. Dockside Green sets a new standard for mixed-use urban developments in North America.

—Thomas Auer

Currently, this development establishes a new global standard for sustainable communities and sets the bar higher as Synergy—the first phase of the development—is the highest-scoring LEED Platinum project to date. As Canadians, we should be proud of this achievement! Why Dockside Green Synergy is the most deserving of this award is that it goes beyond green and delivers the complete Triple Bottom Line by incorporating sustainable social and economic aspects. The design is most successful at the ground and roof levels. The development team has completely understood and celebrated human scale and how people, flora and fauna will harmoniously live, work and play within the community. In general, the quality of architecture amongst all of the candidate projects was good. We were able to assess almost all projects at a level playing field of sustainability. Therefore, the jury was able to focus much more on the buildings as architecture. The candidates' follow-through from concept design to built form was well re-



ENRICO DAGOSTINI



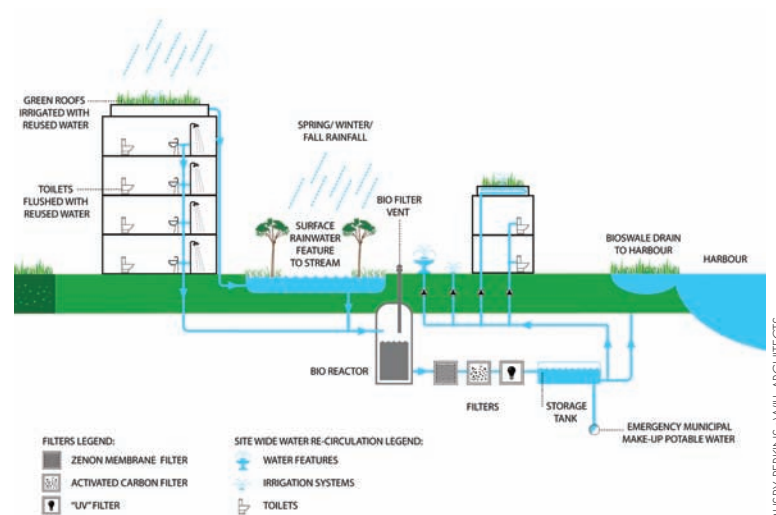
ENRICO DAGOSTINI

TOP THE MASSING OF PHASE ONE ALONG VICTORIA'S HARBOURFRONT. **ABOVE** AN IMAGE OF SOME OF THE COMPLETED TOWNHOUSES AND LANDSCAPE FEATURES; THE NEXT PHASE OF CONSTRUCTION IS ALREADY UNDERWAY. **BELOW LEFT** A PHOTOMONTAGE OF THE COMPLETE BUILT-OUT VISION FOR VICTORIA'S DOCKSIDE GREEN.

solved. The level of exterior and interior integration and the realization of the buildings as a whole was good.

—Lisa Bate, FRAIC

BUSSY PERKINS+WILL ARCHITECTS



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PAUL RAFF



STEVEN TSAI



STEVEN TSAI

In each of his urban interventions, Paul Raff seeks to make visible an intense poetic connection with place. He has collaborated with filmmakers, landscape architects, engineers and other artists to realize his investigations of the possibilities of material, the romantic qualities of space and the receptiveness of the viewer—or “experiencer”—of his works. These three elements have combined to create a range of diverse, powerful works influenced by the Situationist idea of psychogeography in which the environment is believed to affect the behaviour of individuals. Raff’s works integrate themselves into buildings, contributing to the architectural experience while engaging the visible and invisible cultural forces at play. They ask, “What is the nature of place? How does place shape one’s consciousness and how is it shaped by individual and collective consciousness?”

Paul Raff is an observer of space. His interventions use related media to explore issues of architecture at the intersection of place and experience. The environment is central to Raff’s work—because his interventions are lived rather than simply observed, they carry potentially visceral impact. Further, by harnessing the inherent poetics of common, often locally sourced materials, his projects achieve a rare magical quality at a manageable cost. Upon graduating from the University of Waterloo, Raff began a series of artistic interventions, all conceived in relation-

ABOVE, LEFT TO RIGHT USING 475 PANELS OF GLASS STACKED ON THE VERTICAL, RAFF’S DESIGN FOR CASCADE, AN INSTALLATION IN A PRIVATE RESIDENCE IN TORONTO, ABSTRACTS THE SENSATION OF LIVING BEHIND A CASCADING WATERFALL; AN EXTERIOR VIEW OF THE CASCADE HOUSE; FRACTURED GLASS INFLUENCED THE DESIGN OF THE CONCRETE FLOOR FOR THE LOBBY OF STRACHAN HOUSE.

ship to architecture. Working with then-collaborator David Warne, *UNBuilding Ways* and *Lucid Dream* offer insight into the formation of Raff’s unusual urban practice.

UNbuilding Ways was an early architectural experiment and gallery installation that Raff calls “a poetic autopsy,” a way of exploring and understanding the possibilities of architecture. Working with structural engineer Morden Yolles, a Toronto house slated for demolition was sliced in two, tipped over and further deconstructed, capsizing about seven degrees every two weeks until it had completely transformed in space. A corresponding gallery exhibit emphasized the experience by rehanging the house’s windows, doors and mirrors, adorned with translucent photographs of themselves, and a video recorded from the point of view of the original house’s television set.

In 2005, director Joshua Dorsey made a short NFB film about Paul Raff titled *The Infiltrator*, in which Raff explores the urban landscape, leading the viewer deep into construction sites and other rarely seen structures. The idea for *Lucid Dream*, an independent project, began when Raff climbed inside an elevator shaft and was so moved by the unusual spatial experience that he

sought to translate the feeling into an artwork. A 28-second video of floating bodies (shot through a swimming pool’s underwater viewing window) was screened inside a freight elevator, digitally rigged to synchronize its movement with that of the lift, giving the feeling of passing bodies, rising or descending.

In recent years, Raff’s projects have moved toward architecturally integrated commissioned works. Strachan House was a commission for the lobby, corridor and shared spaces of a Toronto institution for the homeless. Faced with the installation of a gypsum concrete floor, Raff, again working with Warne, married practical concerns with the need to create something meaningful for the inhabitants. After meeting with residents, he reinterpreted the shifting, stained characteristic of the street outside into a kind of landscape. He lay thin tracks of plywood into the floor, forming a pattern based on fractured glass, over which the concrete was poured, subtly hand-coloured and set, fossil-like, with objects—a shoe, a small bicycle wheel—selected by the residents from their lives on the street.

Another commission is *Garden Pavilion*, a sculptural piece designed as the focal point of an



ROBERT BURLEY

artist's garden co-op. The deceptively simple wooden structure, with an open, lattice-like surface, is constructed from knotty cedar two-by-fours—"the cheapest, non-toxic building material we could find," says Raff. The pavilion sits five people, as stipulated by the client. *Garden Pavilion* is exemplary of Raff's geometrically

complex experiences created from simple materials and embodies his philosophy that each project increases the resonance of the relationship between people and place.

Similarly, *Cascade*, Raff's most recent project, is a glass sculptural piece set directly in front of the entire front window of a Toronto residence.

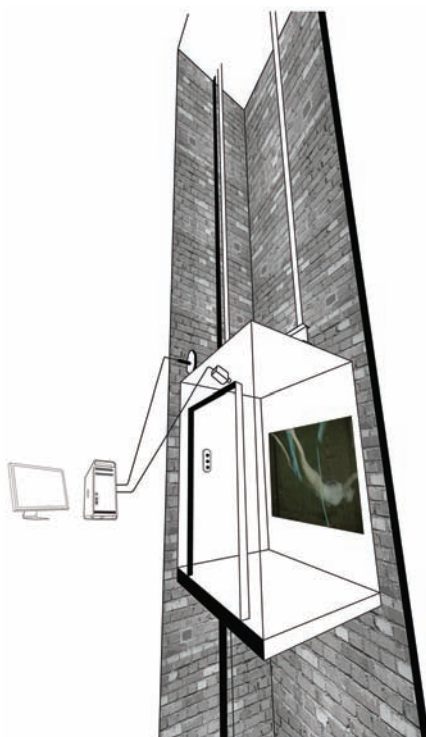
Over 400 panels of inexpensive 3/4-inch glass are stacked vertically to offer privacy and a "passively kinetic" experience that Raff likens to being behind a waterfall. The piece offers a softened, gently fractured view that plays with light and echoes the serenity of the neighbourhood. At the same time, Raff has powerfully harnessed glass as a material that absorbs, reflects and refracts light.

Over the course of his career, Paul Raff has played a significant role at the intersection of art and architecture. His hugely creative interventions perform an artistic function: they encourage awareness of space within the language and material of architecture.

Jury Comments

Paul Raff successfully utilizes a minimalist approach, using simple materials, and focuses on doing more with less. His most recent work demonstrates the creative use of light refraction and its kinetic expression. The "waterfall" panel is a successful intervention which changes the experience of an existing space in a dramatic fashion. Challenging and edgy, his work enhances and contributes to the architectural experience.

BELOW, LEFT TO RIGHT A DRAWING DEPICTING THE 28-SECOND VIDEO ENTITLED *LUCID DREAM* THAT WAS INSTALLED INSIDE AN ELEVATOR CAB; TIME-LAPSED PHOTOMONTAGES OF *LUCID DREAM*; RAFF'S LATTICED GARDEN PAVILION ACTS AS AN EXPERIENTIAL GARDEN SCULPTURE.



PAUL RAFF STUDIO



STEVEN EVANS

GREG HAYTON



BEN RAHN/A/FRAME



BEN RAHN/A/FRAME

Greg Hayton has been the Chief Executive Officer of the Cambridge Libraries and Galleries for over 25 years. Prior to that, he managed the Fort Erie Public Library for four years. Along with a Bachelor of Arts degree (1969), and a Master of Library Science from the University of Toronto (1973), he also has a Masters degree in Business Administration from the State University of New York at Buffalo (1983).

In addition to his administrative responsibilities in Cambridge, Hayton worked as a library space-planner on a number of projects as an associate for Fox Jones Consultants. He has made presentations at many conference on budgeting, planning and working with politicians and architects. As part of his professional activities, Hayton has been very involved with the Ontario Library Association. In 1996 and 1997 he served as Vice President, then President of the OLA.

Hayton is well-known for his interest in art, architecture and design. He has worked diligently to expand the presence of Cambridge Galleries in the community and has managed many library and gallery building and renovation projects. Over the years, he has worked with a number of well-known architects including Trevor Garwood Jones of Hamilton, Don McIntyre of MMMC

Architects in Brantford, Carlos Ventin of Simcoe, and Phillip Carter and Stephen Teeple, both of Toronto.

More recently under Hayton's direction, the Cambridge Libraries and Galleries completed Design at Riverside, a gallery of architecture and design in the relocated University of Waterloo School of Architecture building in Cambridge. Design at Riverside—managed by Cambridge Libraries and Galleries—is one of only two professionally staffed galleries in Canada with a curatorial program exclusively focused on architecture and design. This facility was designed by Janna Levitt of Levitt Goodman Architects and recently won a 2008 Award of Design Excellence from the Ontario Association of Architects. It's also to be featured in an upcoming 2009 book on innovative gallery spaces.

Hayton's most recent building project has been the expansion of the Hespeler Library designed by Alar Kongats of Kongats Architects. Featured in a number of books and magazines, the building also received an Ontario Association of Architects Award of Design Excellence in 2008. Earlier in 2004, the Hespeler Library won a prestigious Award of Excellence from *Canadian Architect*.

ABOVE, LEFT TO RIGHT DESIGN AT RIVERSIDE IS PART OF CAMBRIDGE LIBRARIES AND GALLERIES AND IS ONE OF TWO GALLERIES SPECIFICALLY DEVOTED TO ARCHITECTURE IN CANADA; AN INTERIOR VIEW OF THE EXPANDED HESPELER LIBRARY (2007) IN CAMBRIDGE, ONTARIO; AN EXTERIOR VIEW OF THE HESPELER LIBRARY.

Jury Comments

Greg Hayton is an important and significant advocate for architecture through consistent and ongoing support of architects and excellence in



CAMBRIDGE LIBRARIES AND GALLERIES



BEN RAHN/AFRAME

architecture. Examples of his contributions include the support of many architecture firms through commissions for libraries and galleries, and the creation of the Design at Riverside Gallery, which is one of only two professionally staffed galleries in Canada dedicated to architecture and design. A number of the projects Hayton has commissioned have received design excellence awards from the Ontario Association of Architects, and have been publicly recognized. Having hosted the Canadian entry to the 2008

Venice Biennale in Architecture, he is currently working on an initiative to bring the Venice Biennale in Architecture event to a permanent site in the city of Cambridge. As a consistent advocate for the public realm and for investment in good architecture, Hayton demonstrates that creative and supportive clients assist the creation of an architectural culture of excellence that extends far beyond his particular geographical region.

OPPOSITE BOTTOM, LEFT TO RIGHT GREG HAYTON HOSTED THE CANADIAN ENTRY TO THE 2008 VENICE BIENNALE, WHICH WAS CURATED BY MARCO POLO AND JOHN MCMINN; HAYTON'S OWN HOUSE SPEAKS TO HIS PERSONAL COMMITMENT TO CONTEMPORARY ARCHITECTURE; THE PRESTON BRANCH LIBRARY DESIGNED BY TEEPLE ARCHITECTS REPRESENTS ANOTHER PROJECT THAT HAYTON ADVOCATED FOR AND MANAGED DURING HIS CAREER.



GREG HAYTON



TOM ARBAN



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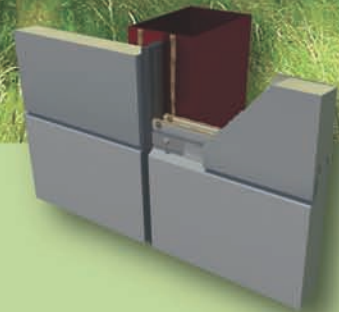
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JOHN AND PATRICIA PATKAU PATKAU ARCHITECTS

Patkau Architects was founded in 1978. In over 25 years of practice, both in Canada and in the United States, the firm has been responsible for the design of a wide variety of building types for a diverse range of clients. Projects have varied in scale from gallery installations to urban planning, and have included houses, libraries, art galleries, schools, community centres, and university buildings. Many projects have involved facilities programming, management of detailed public processes, and the design of complex buildings and sites.

Patkau Architects has received significant national and international design awards for a wide variety of building types, including 10 Governor General's Medals, four *Progressive Architecture* Awards, 13 *Canadian Architect* Awards of Excellence, and a Royal Architectural Institute of Canada Innovation in Architecture Award of Excellence, as well as two American Institute of Architects Honor Awards.

The firm has won a number of design competitions including the Canadian Clay and Glass Gallery in Waterloo, Ontario; the Nursing and Biomedical Sciences Building for the Health Science Center at the University of Texas in Houston; College Housing for the University of Pennsylvania; the Grande Bibliothèque du Québec, a new central library for the province of Quebec; and a major addition to the Winnipeg Public Library.

The work of Patkau Architects has been published and exhibited widely. Over 200 articles in books and professional journals, and three books dedicated exclusively to the firm's work have been published. The work has also been exhibited in numerous exhibitions, including 20 solo exhibitions in Canada, the United States, and Europe. In 1996, Patkau Architects represented Canada at the Venice Biennale.

In addition to practice, Patricia Patkau has taught, lectured and been a guest critic at numer-

LEFT THE CEDAR-SHINGLE-CLAD ROOF FORMS OF THE SEABIRD ISLAND SCHOOL IN AGASSIZ, BRITISH COLUMBIA (1988)—AN ICONIC BUILDING IN CANADIAN ARCHITECTURAL HISTORY.

JOHN PATKAU

JAMES DOW



PATKAU ARCHITECTS



STEVEN EVANS



Selected Projects

1978 Galleria Condominium, Edmonton, Alberta

Progressive Architecture Award, 1981

1982 Research Office, Alberta Research Council, Edmonton, Alberta

Canadian Architect Award of Excellence, 1984

1983 Pyrch House, Victoria, British Columbia

Canadian Architect Award of Excellence, 1984; Governor General's Medal, 1986

1985 Porter/Vandenbosch Renovation, Toronto, Ontario

Governor General's Medal, 1990

1985 Appleton House, Victoria, British Columbia

Canadian Architect Award of Excellence, 1986; Governor General's Medal, 1990

1986 Kustin House, Los Angeles, California

Canadian Architect Award of Excellence, 1987

1988 Seabird Island School, Agassiz, British Columbia

Canadian Architect Award of Excellence, 1989; Governor General's Medal, 1992; Canadian Wood Council Honour Award, 1992

1988 Canadian Clay and Glass Gallery, Waterloo, Ontario

Canadian Architect Award of Excellence, 1990; Governor General's Medal, 1997

1990 Newton Library, Surrey, British Columbia

Canadian Wood Council Award, 1994; Governor General's Medal, 1994

1991 Barnes House, Nanaimo, British Columbia

Canadian Architect Award of Excellence, 1992; Progressive Architecture Award 1993; Governor General's Medal, 1997

1992 Strawberry Vale School, Victoria, British Columbia

Canadian Architect Award of Excellence, 1994; Progressive Architecture Award 1995; Governor General's Medal, 2002

1995 Shaw House, Vancouver, British Columbia

Record House Award, 2002; Governor General's Medal, 2004; American Institute of Architects Honor Award, 2005

1996 Agosta House, San Juan Island, Washington

Governor General's Medal, 2004; American Institute of Architects Honor Award, 2005



JAMES DOW



JAMES DOW



PAUL WARCHOL

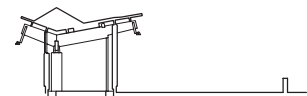
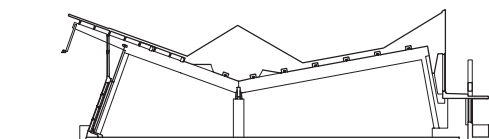
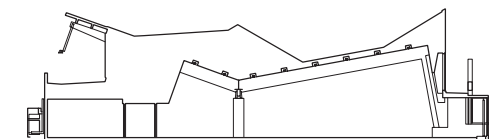
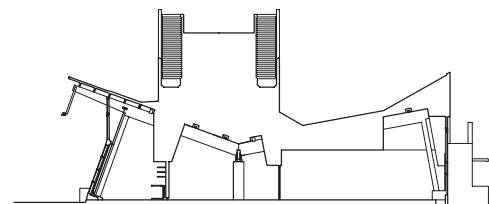
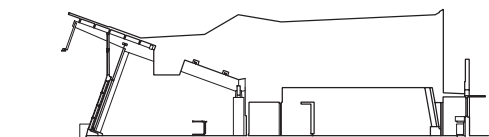
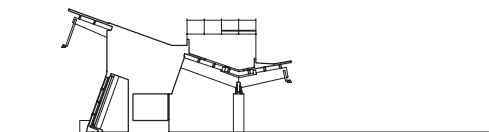
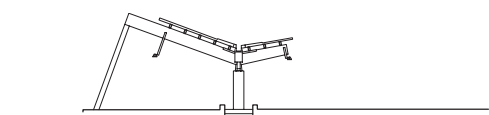


TOP, LEFT TO RIGHT THE SEABIRD ISLAND SCHOOL; A MODEL OF THE SEABIRD ISLAND SCHOOL, ONE OF MANY FINELY CRAFTED MODELS FOR WHICH THE PATKAUS ARE FAMOUS FOR PRODUCING; THE CANADIAN CLAY AND GLASS GALLERY (1988) RECEIVED NUMEROUS AWARDS AND INTRODUCED CENTRAL CANADA TO THE ARCHITECTS' WORK; WITH ITS INVERTED ROOF, NEWTON LIBRARY (1990) FIGURED PROMINENTLY IN THE EDUCATION OF CANADIAN ARCHITECTURE STUDENTS IN THE 1990S; A MODEL OF NEWTON LIBRARY, ATTACHED TO THE MASSIVE SOLIDITY OF A HEAVILY ARTICULATED BASE.

JAMES DOW



PATKAU ARCHITECTS



CROSS-SECTIONS OF NEWTON LIBRARY

1996 Nursing and Biomedical Sciences Building, University of Texas, Houston, Texas

Canadian Architect Award of Excellence, 1998; Progressive Architecture Award, 1999

1998 La Petite Maison du Weekend, Wexner Center for the Arts, Columbus, Ohio

RAIC Innovation in Architecture Award of Excellence, 2001

2000 La Grande Bibliothèque du Québec, Montreal, Quebec

2002 Winnipeg Centennial Library Addition, Winnipeg, Manitoba

Canadian Architect Award of Excellence, 2004

2002 Centre for Music, Art and Design, University of Manitoba, Winnipeg, Manitoba

Canadian Architect Award of Excellence, 2005

2004 New College Student Residence, University of Pennsylvania, Philadelphia, Pennsylvania

Canadian Architect Award of Excellence, 2004



JAMES DOW



PATKAU ARCHITECTS

OPPOSITE BOTTOM, LEFT TO RIGHT THE EXTERIOR OF THE BARNES HOUSE (1991); AN INTERIOR VIEW OF THE BARNES HOUSE; THE ROOFTOP SWIMMING POOL AT THE SHAW HOUSE (1995) ALLOWS NATURAL DAYLIGHT TO FILTER THROUGH ITS GLASS BOTTOM INTO THE HOUSE BELOW; THE ARCHITECTURE OF THE AGOSTA HOUSE (1996) IS PRIMARILY DERIVED FROM A RANGE OF SCREENING DEVICES; A MAQUETTE FOR THE PETERSON-MUNCK HOUSE SUGGESTS A POINT OF DEPARTURE FOR THE FIRM.



ABOVE, LEFT TO RIGHT A STUDY MODEL OF THE STRAWBERRY VALE SCHOOL (1992); A FRAMED VIEW TOWARD THE EXTERIOR OF STRAWBERRY VALE; THE SCREENED FAÇADE OF THE NURSING AND BIOMEDICAL SCIENCES BUILDING (1998).

ous universities in Canada, the United States, and Europe. In 1995, John and Patricia Patkau were jointly Eliot Noyes Professor of Architecture at the Graduate School of Design, Harvard University; and in 1998, they were jointly Raymond E. Moritz Distinguished Visiting Professor at Washington University in St. Louis.

John Patkau was born in Winnipeg, Manitoba in 1947, and graduated from the University of Manitoba with a Master of Architecture degree in 1972. A LEED-accredited professional, he is also a Fellow of the Royal Architectural Institute of Canada, an Honorary Fellow of the American Institute of Architects and the Royal Institute of British Architects, a member of the Royal Canadian Academy of Art, and a Member of the Order of Canada.

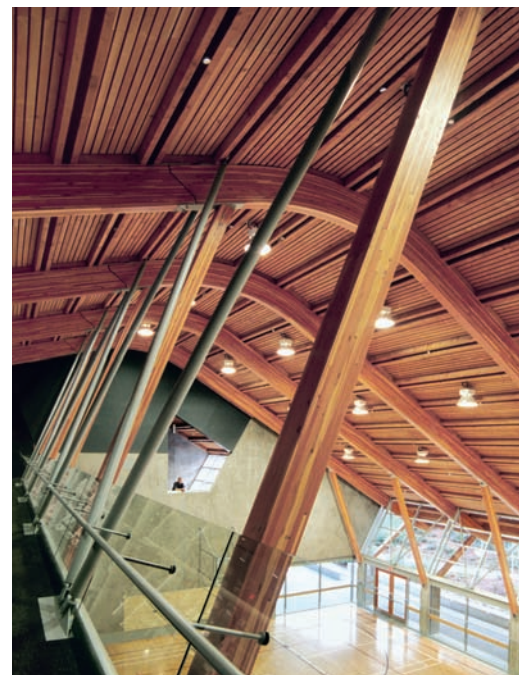
Patricia Patkau was born in Winnipeg, Manitoba in 1950. She graduated from the University of Manitoba with a Bachelor of Interior Design degree in 1974 and from Yale University with a Master of Architecture in 1978. She is a Fellow of the Royal Architectural Institute of Canada, an Honorary Fellow of the American Institute of Architects and the Royal Institute of British Architects, a member of the Royal Canadian Academy of Art, and a Member of the Order of Canada. She is currently a Professor in the School of Architecture

and Landscape Architecture at the University of British Columbia.

Jury Comments

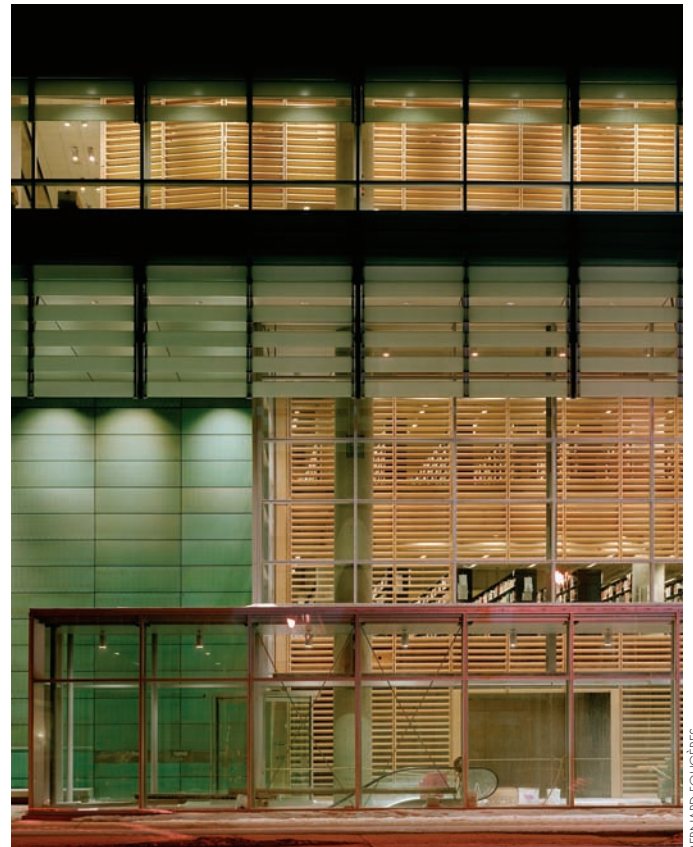
The Patkaus are uncompromising in their work, creating architecture that matters. Internationally recognized, they are ambassadors of the best of West Coast and Canadian architecture. There is a uniquely northern aspiration to their work which is expressed in light and space, and experiencing their buildings changes one from an observer to an engaged participant in the architecture. As such, the firm's work fulfills the dream that ordinary people have about architecture: that life can be more whole, more harmonious, more liveable because such buildings exist. The Patkaus' practice successfully demonstrates that creative collaboration is the fundamental element of architectural excellence, and John and Patricia's work as architects and teachers has inspired generations of aspiring architects across Canada.

BOTTOM LEFT *LA PETITE MAISON DU WEEKEND* (1998) WAS COMMISSIONED BY THE WEXNER CENTER FOR THE ARTS IN COLUMBUS, OHIO. THE INSTALLATION WAS PART OF AN EXHIBITION ENTITLED *FABRICATIONS*. THE PATKAUS USED THIS COMMISSION AS AN OPPORTUNITY TO EXPLORE IDEAS ABOUT SUSTAINABILITY THAT THEY WERE CONSIDERING FOR THE NURSING AND BIOMEDICAL SCIENCES BUILDING, IN ADDITION TO STUDYING HOW THE BODY INHABITS SPACE. **BOTTOM RIGHT** THE GLEN-EAGLES COMMUNITY CENTRE IN WEST VANCOUVER (2003) ALLUDES TO THE WORK OF ALVARO AALTO.





ABOVE, LEFT TO RIGHT THE AGOSTA HOUSE IS SITED ON THE CREST OF A HILL OVERLOOKING THE STRAIT OF JUAN DE FUCA; THE WINNIPEG CENTRAL LIBRARY ADDITION (2005) TRANSFORMED THE EXISTING LIBRARY FACILITY WITH THIS POPULAR CENTRAL ATRIUM SPACE AND READING AREA. **BELOW, LEFT TO RIGHT** THE FOYER OF THE GRANDE BIBLIOTHÈQUE DU QUÉBEC IN MONTREAL EMBEDS A VARIETY OF THE PATKAUS' ARCHITECTURAL PREDILECTIONS—SCREENS, SECTIONALLY DRIVEN MASSING AND A SOPHISTICATED EXPRESSION OF STRUCTURE; THE LIBRARY'S VARIOUS STRUCTURAL AND MATERIAL ELEMENTS COM-
PRISE A STUDIED COLLAGE WHEN VIEWED FROM THE STREET.





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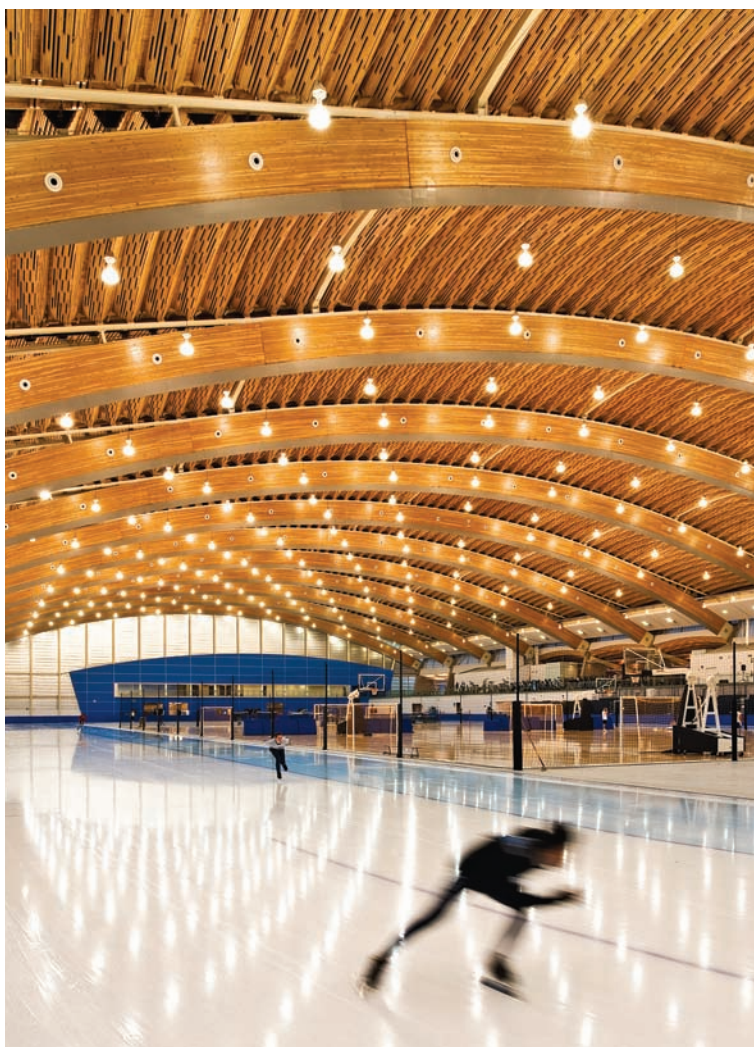


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RICHMOND OLYMPIC OVAL

HUBERT KANG



ARCHITECT CANNON DESIGN
LOCATION RICHMOND, BRITISH COLUMBIA

The City of Richmond Speed Skating Oval is a vast 506,000-square-foot structure designed as a dual-use building, housing not only the speed skating venue for the 2010 Olympic Games, but also, after the Games, becoming a permanent legacy facility functioning as an International Centre of Excellence for Sports and Wellness. Several design features include: the innovative use of one million board feet of discarded pine-beetle-killed wood in the creation of a stunningly beautiful structural ceiling; the innovative design of a composite wood glulam beam spanning 100 metres, which creatively integrates with the distinctive pine-beetle wood structural ceiling; the innovative design of heating, ventilating, air-conditioning, plumbing, acoustical, electrical and lighting systems, all integrated seamlessly into the structural systems; and the innovative design in the way in which the building's dual function has been incorporated to provide the flexibility, adaptability and conversion features required from a single-purpose venue to a multi-use International Centre of Excellence for Sports and Wellness.

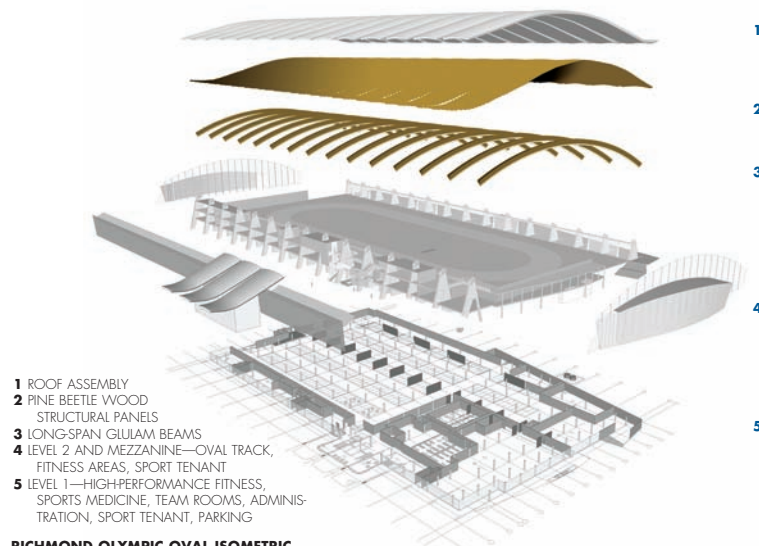
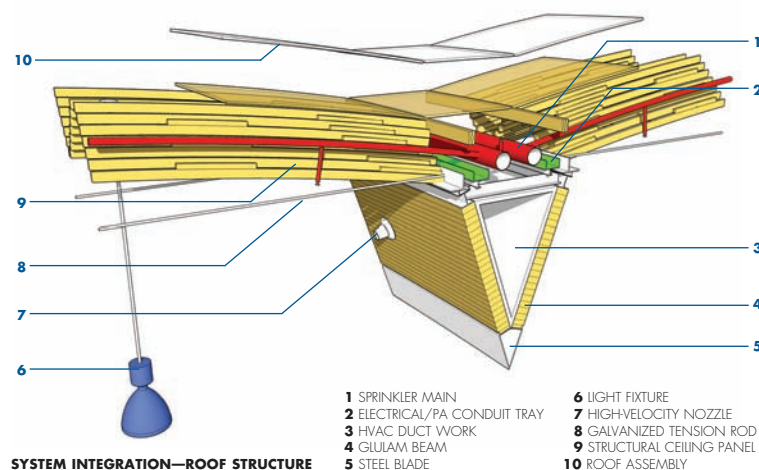
The Oval's main structure is comprised of 15 composite wood glulam arches or beams, spanning an unprecedented 100 metres in length. Local BC Douglas Fir lumber is used here, formed into a V-shaped composite arch to span the 100 metres, carried on 30 concrete buttresses. This design

ABOVE, LEFT TO RIGHT THE EXPANSIVE INTERIOR SPACE OF THE RICHMOND OVAL; A PHOTO OF THE FACILITY'S EXTERIOR ILLUSTRATES THE ENORMOUS CONCRETE BUTTRESSES REQUIRED TO BRACE THE 100-METRE-LONG GLULAM BEAMS.

not only allows for an increase in the lateral stiffness of the arches but also provides interior space for air distribution and services. Additional innovation in arch fabrication was necessary as the geometry of the glulam beams and their stability relies greatly on the composite steel "skate-blade" beam that provides the base anchor for the wood material. This meant that the wood arches needed to be imported to a steel-fabrication facility and integrated into composite sectional beams to be assembled on site.

The Oval's ceiling and the secondary structural panels spanning 15 metres between the glulam beams are composed of locally harvested, pine-beetle-killed wood, in the form of standard 2" x 4" lumber, simply nailed together to form a V-shaped wood box, arched to create the vaulted ceiling panels forming the "wood wave." Pine forests in BC have been devastated by the pine-beetle epidemic. By using discarded pine-beetle-killed wood for the entire 100 metre x 200 metre area of the ceiling structure of the Oval, with one million board feet of lumber, the design team has produced, with the use of ordinary domestic lumber, a unique and distinctively beautiful surface.

The 20,000-square-metre ceiling of the Oval has all the heating, ventilat-



ing, air conditioning, plumbing, acoustical, electrical and lighting systems fully integrated into the structural system of the glulam arch and the “wood wave” pine-beetle ceiling. HVAC ducts are integrated within the glulam beams with motorized nozzle jets placed along the length of the arch that deliver conditioned air to wherever it is needed and to provide environmental separation between the rinks and dry-land sport functions below. Electrical and other conduits are concealed within the pine-beetle structural ceiling panels. The desired acoustical properties are attained through the use of soft lumber, the perforations within the boxed pine-beetle wood beam, interior acoustical blankets and the V-shaped profile of the wood wave ceiling panels themselves.

Flexibility and adaptability within the multi-use legacy mode to allow for combined sports, recreation and community uses, all functioning at the same time as well as allowing conversions of each of these venues. For example, one most likely and popular conversion option is: 1/3 of the oval used for track & field programs, another 1/3 of the oval used for floor sports such as basketball courts, volleyball courts, etc., and the remaining 1/3 of the oval used for two international-sized ice rinks. The indoor speed skating facility is a relatively new building type, and the first purpose-built oval was built for the Calgary Olympic Games in 1988. Before that, all long-track speed skating events occurred outdoors. All indoor speed skating facilities built to date have been single-use sport-only buildings which gives rise to significant revenue and operational challenges in the life of the facility

since speed skating is a seasonal sport limited in use to athletes. The design of this Oval takes the evolution of this building type to a new level by not only meeting the high-performance sport requirements of long-track speed skating, but by enabling the facility to be convertible to several other sport and non-sport uses as well as for civic and community functions. The main activity space will allow ice sport to coexist with other sports or assembly uses at the same time. As well, the facility is designed to revert to the 400-metre-long track speed skating oval at any point in the future.

The cost implications of using wood as a major ceiling material as well as for the main and secondary structural members are more often than not prohibitively expensive. By using the locally harvested lumber from the dead pine forest, the cost savings—due to the innovative structural design and assembly of the lumber—was substantial, which allowed the design team to achieve the desired effect affordably.

Jury Comments

The innovative use of the discarded pine-beetle-killed wood integrates the spanning system with the mechanical systems and creates an elegant roof. Here, glulam construction has evolved into elegant sculptural arches that integrate all HVAC, electrical and plumbing systems. The project demonstrates that a large-span structure can also manage to feel intimate, and allows for an effective amount of perimeter daylighting for the interior functions.

PRINCE GEORGE AIRPORT

ARCHITECT MCFARLANE | GREEN | BIGGAR ARCHITECTURE + DESIGN INC.

LOCATION PRINCE GEORGE, BRITISH COLUMBIA

The Prince George Airport addition and renovation design was the product of two phases of development. The first phase addressed new security measures required by the changes to airline travel after September 11, 2001. New requirements by the Canadian Air Transport Security Authority (CATSA) resulted in a national program to upgrade Canadian airports with new equipment and, at times, new space. The second phase addressed new demand for international travel to and from the region.

Involving the expansion of the existing terminal to include a new departure lounge, international arrivals area, security screening area, baggage “makeup,” support offices and renovations to the existing check-in hall and arrivals areas, the design modernizes the 1970s terminal.

The structure is exposed heavy timber, concrete and steel. The design focuses on the craft of the structural and envelope detailing. Exterior cladding includes an innovative structurally glazed curtain wall supported on custom-designed castings. The unique point-fixed glazing system penetrates only the inner pane of laminated glass in the insulated unit preventing thermal bridging. The glazing solution is the first of its type in North America and illustrates

that more innovative glazing systems can be achieved in cold climates. The same ductile steel castings were used to support the roof and were also used for the benches in the departure lounge, illustrating the design’s integration of architectural solutions from structure to furniture.

Materials were selected for their purpose and not for their decorative value. Wood became the dominant material as a means to satisfy the project’s ambitions to relate to the regional economy and aesthetic. Fir ceilings and exterior soffits continue the plane of the interior to the exterior of the terminal. Interior wood elements include birch-box seating and maple benches that were designed to create variety and intimacy within the departure lounge.

Arriving passengers are greeted with a skylit central atrium that serves as the primary circulation linking departing and arriving passengers. The dense structure is layered with a fir sun-screen and a steel-and-engineered-wood structure.

The back-of-house baggage “makeup” area is enclosed with translucent polycarbonate planks in extruded aluminum frames. The polycarbonate screens the work area while providing a luminous box from the exterior as passengers descend to the apron from their aircraft. Charcoal fibre-cement panels and panellized cedar complete the exterior palette and continue into the interior.

The Prince George community sees the airport

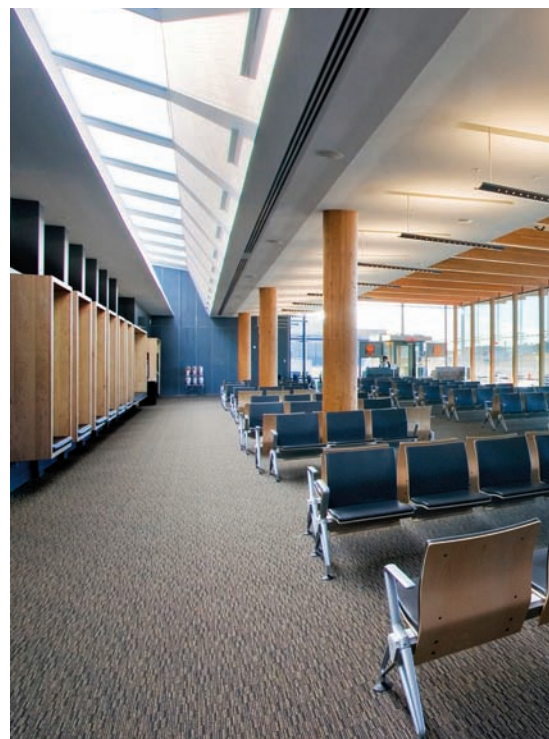
redevelopment and the terminal’s design as a catalyst for future growth and as a strong symbol as a gateway for commerce, industry and tourism.

Timber has been handled in a number of unique ways in the terminal design. The design team replaced the common steel-plate and bolted connections found in heavy timber buildings with a much more aesthetically subtle system of mortised knife-blade plates and “flush-pin” stainless steel hardware. Most of the connection details were first studied and developed in Europe but are beginning to become more prevalent in North America with leading examples of the Prince George Terminal helping to illustrate the importance of the evolution of timber structural design.

One of the goals of the design was to create a seamless indoor-outdoor experience for travelers in the departure lounge. The effective relationship of the ground-level departure lounge to the exterior allows passengers to visually connect with the wilderness that spans the horizon. It is common in Prince George that bears and other wildlife wander just opposite the terminal and beyond the runway. To achieve a strong visual connection to the outside, the design team selected a structural glazing solution that resulted in a thermally broken glazing system where the point-fixed stainless steel structure penetrates only the inner laminated glass sheet of the sealed glazing units. The exterior pane of glass is not penetrated, ensur-



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ing the insulation of the glass. To make this possible, the design team developed a CNC timber curtain-wall support system and bespoke cast-iron brackets to support the point-fixed glazing system. The result is a highly energy-efficient structurally glazed curtain wall with the added benefit of a laminated glass layer that dramatically reduces noise transmission. The sound-dampening benefit proves to be equally important to the thermal improvements in the effectiveness of the solution as jet aircraft sit only 100 feet from the glass.

The design team developed custom ductile structural steel castings specifically for the project. Initial prototypes were developed in house by first sculpting the desired form in wood. The design was refined through a digital-modelling process as the team explored multiple applications, including the roof structure and structural glazing as well as lighter-weight furniture applications. The result is a triangular cross-section for the casting that is a marriage of technical requirements and aesthetic intent. The design team's commitment to develop custom structural components for the project illustrates a desire to challenge architectural solutions built from the standard kit of parts available to the industry by finding ways to use the same parts for a diverse range of solutions. The feasibility of creating custom components for an economical project was greatly enhanced by creatively finding multiple applications. As a result, the castings

found their home in the roof structure, the glazing structure and the furniture of the project.

Typical airports often treat the airside service aspects in a very rudimentary way, where the architectural expression gives way to pure pragmatics. Prince George created a unique challenge, however, because passengers board all aircraft directly from the service apron area and therefore have a more direct relationship with all of the baggage handling and other functions. Passenger experience could be enhanced significantly if the airside service functions of the terminal were handled elegantly without sacrificing economical construction means. Creating a high-quality working environment for the baggage handlers was identified as equally important, and is often overlooked in typical terminals. The design team addressed both concerns through the development of a polycarbonate-glazed curtain-wall system with integral polycarbonate scissor doors. The gentle translucence of the polycarbonate skin allows the baggage-handling area to glow as a welcoming beacon as passengers arrive at night. During the day, it also provides a beautifully daylight working environment for employees, while concealing

the baggage storage areas from passenger view. The team detailed bi-folding scissor doors to seamlessly integrate with the envelope when in the closed position. When open, the doors provide weather protection at the entry points. The approach underscores the desire to redefine the perception of some of the most basic functional aspects of airport terminals in a manner that enhances the experience of passengers and employees alike.

Jury Comments

Representing an innovative example of art in architecture, this project utilizes innovative technology only where it needs to, resulting in simple beautiful surfaces and minimalist details. The project shows that simple detailing such as the steel-to-timber connections enhance the beautiful interior while also minimizing the sense of material mass, contributing to a feeling of openness to the exterior and a roof that appears to float. The project is particularly elegant given the context of normal cost constraints.

OPPOSITE BOTTOM, LEFT TO RIGHT AS VISITORS ENTER THE BUILDING, THE RHYTHMIC WOODEN STRUCTURE OF THE ATRIUM IS BEAUTIFULLY ENCASED WITHIN A SPECIALLY ENGINEERED GLAZING SYSTEM; THE COMBINATION OF CUSTOM-DESIGNED CASTINGS TO SUPPORT THE ROOF AND A SKYLIGHT RUNNING THE LENGTH OF THE HOLDING ROOM PROVIDES THE AIRPORT WITH A REGIONAL AND RELAXED AMBIENCE; THE INTERNATIONAL ARRIVALS AREA.



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130 BLOOR STREET WEST



ARCHITECT QUADRANGLE ARCHITECTS LIMITED
LOCATION TORONTO, ONTARIO

ABOVE A RENDERING OF THE COMPLETED ADDITION OF LUXURY CONDOMINIUMS ON TOP OF AN EXISTING MIXED-USE BUILDING.

How do you add a whole new building to the top of an existing, functioning building in the heart of downtown Toronto? With a great deal of design savvy and a huge amount of planning. Set for completion in 2009, 130 Bloor will feature impressive residential suites, as well as high-end retail and office space. Quadrangle Architects was selected to undertake the project, including the distinct challenge of adding onto the top of an existing building while at the same time renovating the operational floors below. The result of these structural gymnastics is 14 new luxury condominiums, nine floors of office space and one floor of prime retail space.

The crown jewel in the development is the existing 1960s penthouse apartment spread across the 13th and 14th floors. Unique to Toronto, all the rooms open onto a two-storey central atrium and feature high ceilings, perfectly matched travertine on floors and walls, and wood panelling from oak logs brought from England and milled specifically for the apartment. In total, the penthouse is 11,000 square feet plus 4,500 square feet of terrace.

Stacked on top of the penthouse is an asymmetrical tower of seven new storeys, faced in Indiana limestone, containing full-floor luxury suites. The two floors below the penthouse, which were

previously used for office space, were cut back to hold four new half-floor residential suites. The existing private penthouse entrance, used by the former owner, connects exclusively to all the residences and a private parking area underground.

The design for the renovation of and addition to 130 Bloor Street West required the undertaking of significant structural work to update and reinforce the existing building, surgically carving up floors 11 and 12 and then, without substantially disturbing the two-storey heritage-listed penthouse above it, adding seven floors of high-end residences. All of this work had to be done while ensuring the office and retail tenants below could maintain their ongoing operations. Quadrangle worked on the existing building for a year before adding floors, including the reinforcement of the building's footings by drilling micro-piles into them.

The building had to be considerably strengthened before the new floors could be added. The first step was an upgrade of the building's first 12 floors, including modernizing the mechanical and electrical systems. Then, demolition experts snipped away about a third of the top two levels of the existing building—floors 11 and 12—to allow for the conversion of the old office space into two terraced, residential floors. The interior construction and new structural bracing were creatively concealed in the façade.

The existing building had to be strengthened so it could handle the weight of both the crane and the Indiana limestone slabs, tinted glass and the addition of 1,400 tons of steel. Steel plate was welded to the reinforced beams to give the structure added strength, and the outside walls were also braced. The roof of the penthouse had a transfer truss installed so that what is essentially a separate building could be built over top. Four layered polyurethane isolation pads, bracing the building from swaying too much both vertically and horizontally, were installed to mitigate subway and traffic noise and vibration from travelling through the steel structure to the residential units.

Special care was taken to ensure that any noise from the offices below would not disturb the tenants of the new condominiums above. An extra space was built between the existing building and the new development and included an acoustic ceiling to further reduce noise impact. In addition to that, vibration isolation material was applied to oversized cast-iron horizontal plumbing lines to reduce the noise of running water.

Quadrangle made some significant changes to major elements of the existing building, including changing the original centre-loaded public corridor to a side-loading one to allow for full-



22 April 2008



13 October 2008



15 October 2008



17 October 2008



22 October 2008



31 October 2008

QUADRANGLE ARCHITECTS

CLOCKWISE FROM TOP LEFT A SERIES OF SIX TIME-LAPSED PHOTOGRAPHS DEPICTING THE ERECTION OF STEEL ATOP THE EXISTING BLOOR STREET BUILDING. **RIGHT** THE COMPLEXITY OF THE DETAILING REQUIRED TO ADD ADDITIONAL FLOORS IS EVIDENCED BY THIS DRAWING OF A GRID INTERSECTION ILLUSTRATING THE ISOLATION PADDING USED TO PREVENT SOUND AND VIBRATION TRANSMISSION FROM THE SUBWAY AND COMMERCIAL ACTIVITIES BELOW. **BOTTOM RIGHT** TWO PHOTOGRAPHS OF THE FAMOUS 11,000-SQUARE-FOOT TORNIO PENTHOUSE, A LANDMARK RESIDENCE WHICH NO LONGER COMPRISES THE BUILDING'S TOP FLOOR.

floor condominiums.

Another major change Quadrangle made was relocating the mechanical space, which included equipment such as boilers and cooling towers, from floors 11 and 12 to floors 3 and 4.

Construction on the addition of the new floors began in May 2008 and started with the concealed interior construction, the foundation work and the structural bracing of floors 11 and 12. A huge design challenge for Quadrangle was working on the next part of the project, floors 13 and 14, as these floors were occupied by the heritage-listed penthouse. While the majority of the penthouse was hidden safely from construction by being enclosed in protective wood sheathing, access was still required and came via the non-heritage area at the back, which had originally been used as servants' quarters. A transfer truss was built above the penthouse to transfer the load of the new tower down the selected support points. This transfer truss is essentially level 15 of the building.

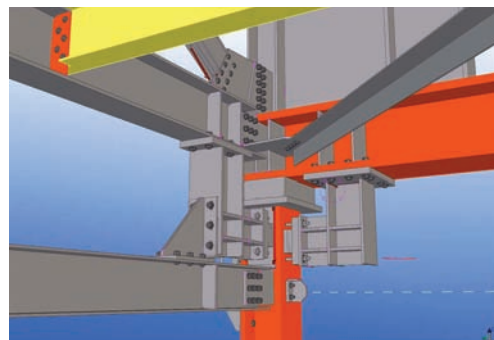
A challenge encountered on the 15th floor was the redesign of some of the cross-bracing to ensure that there would be no overlapping of the cross-bracing and the windows being installed.

The solution was to install the new levels two floors at a time. This work was undertaken at night so that existing exits could be temporarily blocked off and new ones installed.

Quadrangle met several other challenges with innovative design, including the method by which the cross-bracing steel was brought into the building through temporarily popping out windows, the late addition of a new floor at the 17th floor level and the installation of new, dedicated elevators on floors 11 to 21 to service the residential floors exclusively.

Jury Comments

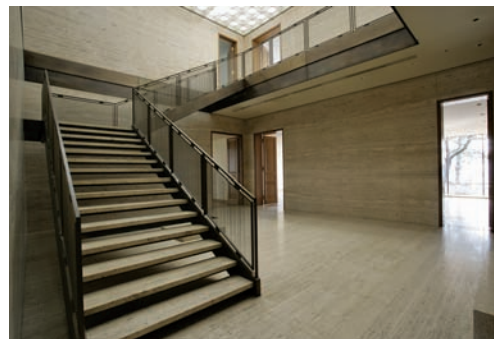
This project offers important approaches in the practice and process of complex, high-density projects. Great inventiveness in logistical planning and technical sophistication is apparent, as are effective resolutions for the isolation of flanking sound. The new condominium units are impressive; they have achieved a very elegant design resolution creating houses in the sky rather than anonymous modules. Constructing new extensions on top of existing buildings will become an interesting trend, and creative solutions such as these offer important lessons.



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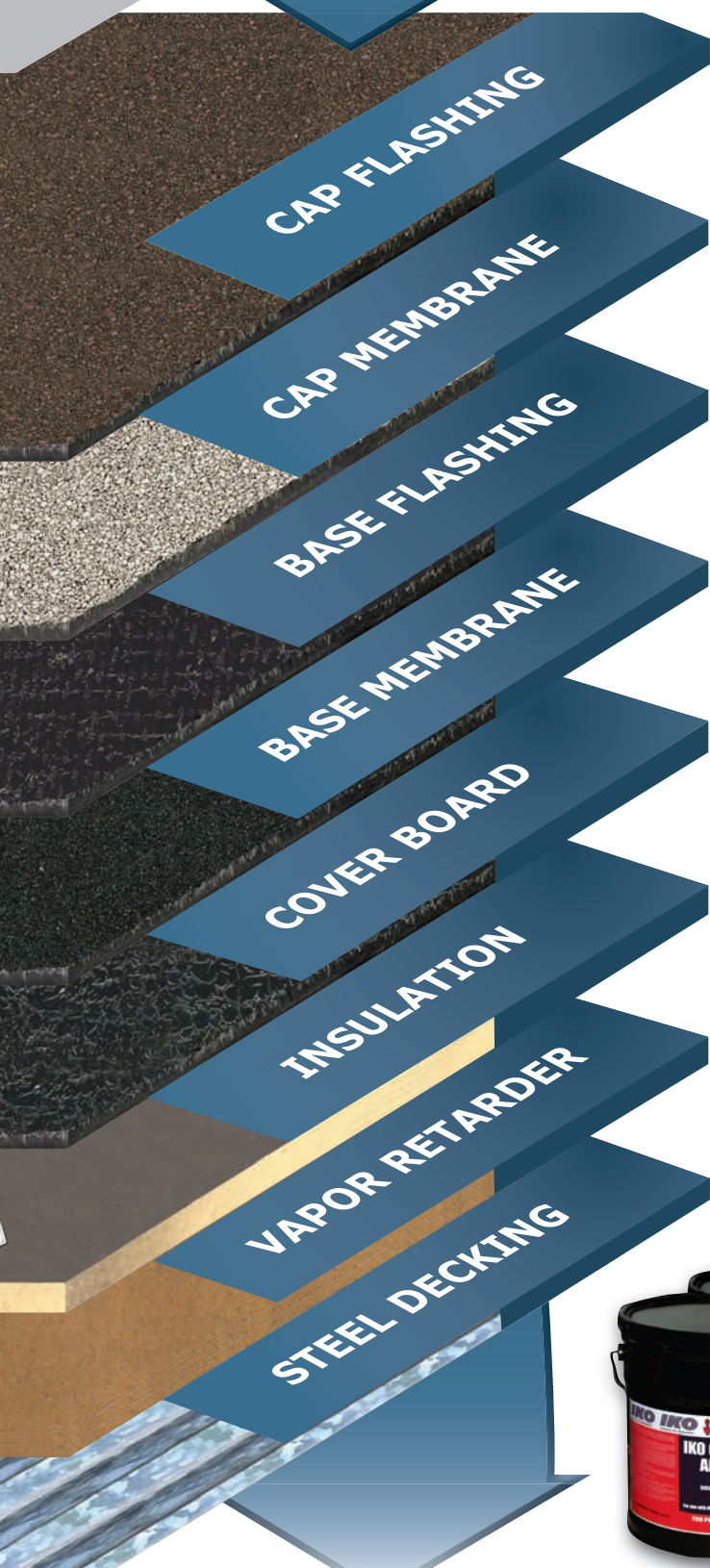
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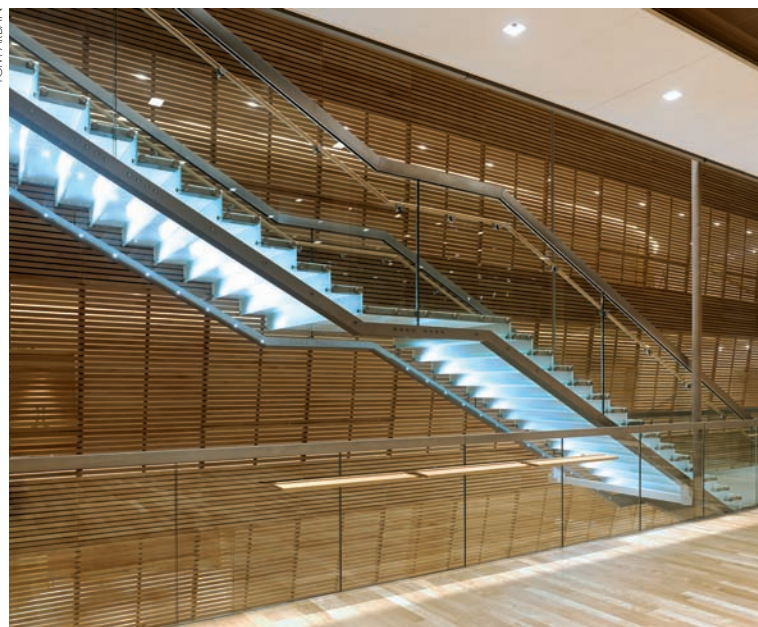
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STAIRS AND LOUVRES

TOM ARBAN



TOM ARBAN



PROJECT FOUR SEASONS CENTRE FOR THE PERFORMING ARTS STAIRCASE
ARCHITECT DIAMOND AND SCHMITT ARCHITECTS INC.

The Four Seasons Centre for the Performing Arts (see *CA*, September 2006) in Toronto is Canada's first purpose-built opera house that received considerable acclaim by performers and patrons when it opened in the summer of 2006. As part of the 2009 RAIC Awards of Excellence, the project received an honourable mention for its free-spanning glass stair located in the City Room, a large front lobby space.

Working from the concept of a staircase comprised almost entirely of structural glass, the architects and structural engineers developed an innovative design that has resulted in the longest-spanning glass stair constructed in the world. With a horizontal run of almost 27 metres and a rise of 8.8 metres, the 2.1-metre-wide glass stair appears to float in the lobby space. The only visible structures are two 15mm x 100mm stainless steel bars at the top and bottom of each balustrade that form the chords of the truss. The web of the truss is constructed from 12 individual glass panels measuring approximately 3,700mm x 1,550mm and constructed from three layers of 12mm low-iron glass laminated together with a 1.9mm clear plastic interlayer. Spanning delicately between the balustrades are the treads, each consisting of two layers of 15mm low-iron glass, a layer of 10mm low-iron glass, and a vertical riser constructed of two layers of 10mm low-iron glass. A sandblasted non-slip wear layer is laminated to the top of each tread to ensure both safety and privacy from below. Through the use of multiple small connections at the nodal points rather than the usual practice of a single large connection, there are no vertical support elements at the glass joints. Every piece of hardware that joins or connects pieces of the stair was individually designed and engineered as part of the design process.

Most glass stairs utilize the balustrades or pickets that are connected to a rigid structure like a floor slab to absorb vibration. In this case, the treads and risers of the stair are used to provide lateral stability and to resist vibration. Human perception of vibration can be influenced and magnified by psychological factors. Therefore, the design team felt it was important to improve upon standard acceptable limits for the glass stair. A potential large volume of traffic walking in unison combined with an uncommon building material such as glass necessitated a thorough investigation of the dynamic properties of the stair and its response to vertically and laterally induced vibrations.

A model of the City Room was developed to analyze and design each component of the stair's supporting elements, which are mainly tension rods hung from the long-span roof truss system. The model was used to study the overall behaviour of the stair under the applied forces and to understand the response of static and dynamic loading. To minimize the concentration of stresses of the glass units, fully rigid connections were avoided.

Because of its innovative nature, the stair was peer-reviewed on two occasions, and each element was subjected to independent testing prior to finalization of the design. The construction of a full-size mock-up of a five-tread section of the stair was a significant part of the design-review process.

The innovation displayed in the design of this stair stems from the close

LEFT, TOP TO BOTTOM TWO VIEWS OF THE GLASS STAIR, WHICH LEADS VISITORS UP SEVERAL LEVELS THROUGH THE PERFORMING ARTS CENTRE'S CITY ROOM. THE ARCHITECT AND STRUCTURAL ENGINEER CONCEIVED OF A STAIR THAT REPRESENTS A SIGNIFICANT DEVELOPMENT IN STRUCTURAL GLASS DESIGN. THE STAIR, WITH A HORIZONTAL RUN OF ALMOST 27 METRES AND A RISE OF 8.8 METRES, IS THE LONGEST-SPANNING GLASS STAIR CONSTRUCTED IN THE WORLD.

working relationship between the architect, the structural engineer, the fabricator and the installer. Issues of safety, failure mode analysis and constructability were also discussed, analyzed and detailed at great length.

PROJECT BLUEPOINT LOUVRE FAÇADE SYSTEM
ARCHITECT PAUL RAFF STUDIO

Paul Raff Studio has designed a unique residential complex with remarkable green design strategies, earning an honourable mention in the process. Its most novel feature is a louvre façade system which was developed as an integral component of a multi-unit housing project in Phuket, Thailand. The project context required a unique response that could provide panoramic views to the ocean, privacy, minimization of solar heat gain, and maximum durability and resilience in a demanding tropical environment.

The Bluepoint Louvre Façade System forms the outermost layer of an exterior wall assembly and consists of fixed vertical louvres, providing an exterior shading solution that limits solar energy from entering the building while offering a range of innovations that optimize views to the exterior.

The louvres are made from a wood composite extrusion that is produced locally. These are supported by the two other major components of the system: steel tabs and support rails which are laser-cut, break-formed and shop-welded. The system's use of wood-plastic composites (WPC) is a relatively new technology that is being used with increasing frequency. WPC is highly resistant to rot, can maintain dimensional stability in high humidity and temperature conditions, and is comparatively lightweight relative to traditional wood components. It is composed of wood from recovered sawdust (and other cellulose-based fibre-fillers such as peanut hulls, bamboo and straw), and waste plastics. Within current construction product markets, WPC is typically extruded in profiles to emulate traditional geometries of dimensional lumber.

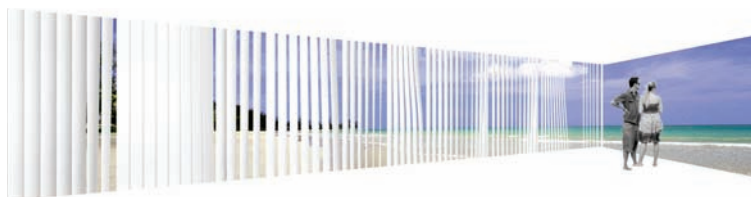
Using exclusively conventional architectural construction drawings in describing this assembly would be radically inefficient, as inherent to this application are hundreds of unique site-responsive conditions requiring excessive visual description. Thus, an instruction set with unique nomenclature and graphic tables was developed as part of the project. This mode of system description eliminates additional complexity associated with language barriers and differing cultures of construction delivery.

In order to achieve the desired visual complexity of the system while minimizing the actual complexity of the construction process, the Bluepoint Louvre Façade System was developed through a parametric modelling process into a highly rationalized set of simple components where mechanical fastening techniques and conditions of anchorage to the building substructure remain straightforward, with limited site adjustment required in the field. Furthermore, web-based communications and file-sharing facilitated project collaboration across 12 time zones and three languages. The inclusion of academic and industry partners across various phases of project development also helped with communications. Finally, the utilization of CADD-linked spreadsheets streamlined the design process and eliminated redundant parts.

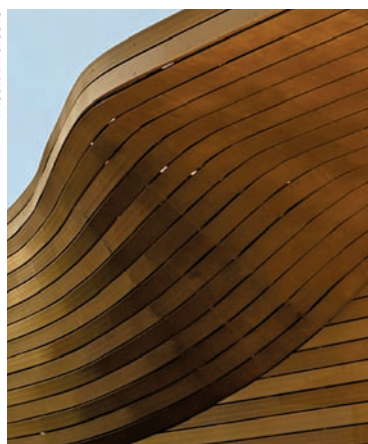
RIGHT, TOP TO BOTTOM THE WEST ELEVATION OF THE LOUVRED WALL SYSTEM; A RENDERING OF A VIEW TOWARD THE SEA, WITH THE LOUVRED SYSTEM INSTALLED; AXONOMETRIC DRAWING; A DETAIL AND OVERALL VIEW OF THE CONDOMINIUM SALES OFFICE WHICH TAKES ITS DESIGN INSPIRATION FROM THE LOUVRED FAÇADE.



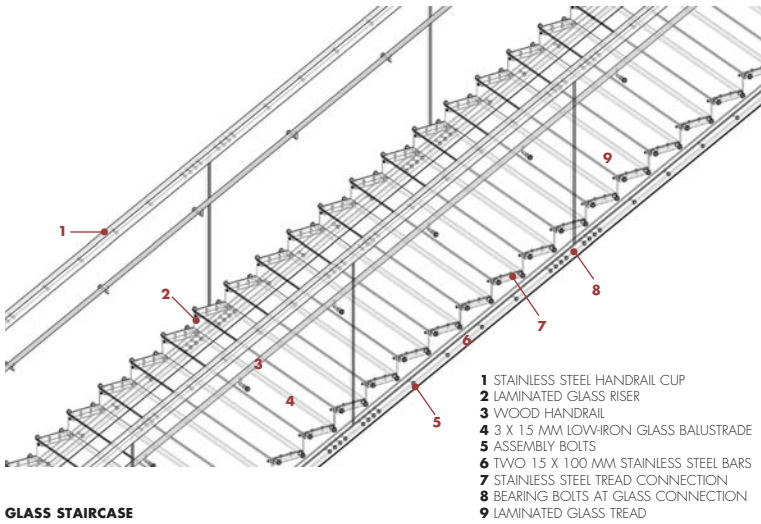
PAUL RAFF STUDIO



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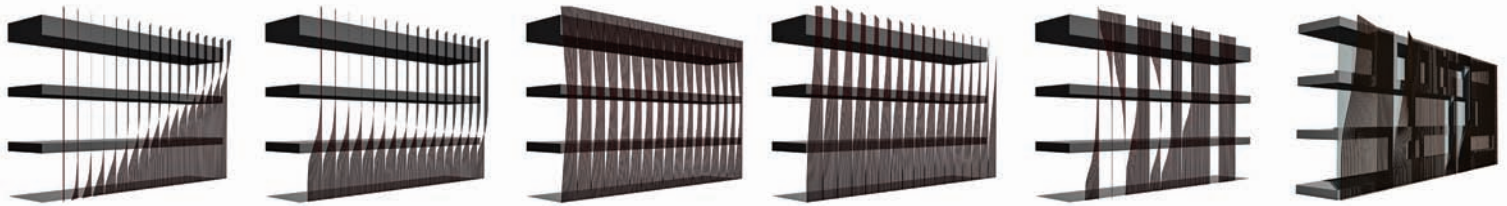
GLASS STAIRCASE



PAUL RAFF STUDIO

TOP RIGHT THE 21-UNIT CONDOMINIUM DEVELOPMENT OVERLOOKS A STUNNING BEACH IN THAILAND. **BELOW** THE BLUEPOINT RESIDENCES INCORPORATE A UNIQUE LOUVRED FAÇADE SYSTEM TO MAXIMIZE LAND-SCAPE VIEWS WHILE OFFERING AN EXTERNAL SHADING DEVICE AND PRIVACY FOR THE RESIDENTS.

This project sets out to further the practice of architecture through the application of new sustainable materials, fabrication techniques, and the potential of design professionals to participate in the development of new product lines outside of the scope of traditional practice. Using readily available technologies (digital-modelling technology, web-based communications and file-sharing, web-based access to academic research, CADD-linked spreadsheets), a small Canadian architectural practice was able to deliver innovative design in a global context.



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BIG IDEAS, SMALL HOUSES

A LOOK BACK AT SOME OF THE WAYS A GOVERNMENT-LED PROGRAM PRODUCED HOUSING FOR A GROWING URBAN POPULATION IN CANADA.

TEXT IOANA TEODORESCU

Throughout the 1950s and '60s, Canadian architects in all provinces were busy at work producing residential designs for a growing urban population. Some of these designs were submitted to what was until 1979 known as the Central Mortgage and Housing Corporation (CMHC), in response to its Small House Design Scheme. After making a selection of desirable house plans, the CMHC published a number of catalogues for prospective homebuyers who could visit a CMHC branch located in their community and choose a new dream home for their family.

These house designs respected the latest building standards at the time and any architectural practice submitting a design had their name associated with the drawings. The CMHC paid architects a fee of \$1,000 for every selected house design, plus royalties of \$3 for every set of working drawings sold. For \$10, a new homebuyer could buy a set of blueprints for a high-quality architect-designed home.

In the early 1950s, bungalows, one-and-a-half-storey and two-storey house designs were each dedicated to their own specific booklet. By the 1960s, these homes would be joined by a range of split-level house designs and assembled into one book that would cover all kinds of single detached dwellings. With the exception of *Small House Designs—Duplexes*, (Ottawa: CMHC, 1949) which appears to have been specifically directed to a Quebec audience, where duplexes have been quite popular—no catalogue was ever dedicated to any other housing type than the single detached dwelling. Interestingly, throughout the two decades in question, Canadian homebuyers were unaware that their views directly influenced what was included in these publications. Plans that sold well were kept in subsequent catalogues, while those that didn't were replaced with trendier ones.

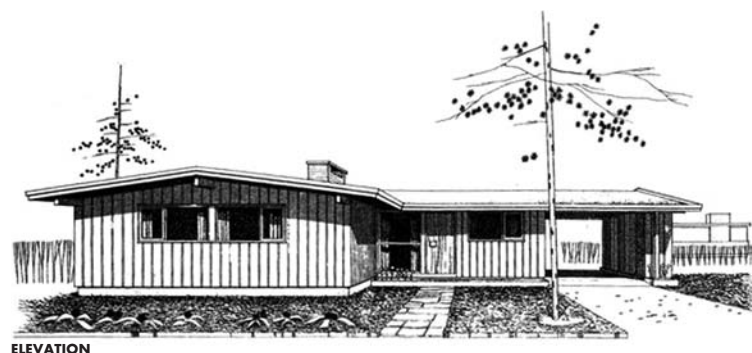
CMHC catalogue designs were largely geared towards people building in small urban areas across Canada who did not have easy access to professional services, particularly those of architects. Rapid urbanization also meant educating Canadians about the importance of architecture. CMHC catalogues in 1954 included sectional perspective sketches that illustrated housing types and explanations on how to read floor-plan sketches—even going so far as to explain the meaning of their symbols.

Seemingly straightforward, the plan procurement method adopted by the CMHC raised a lot of concern amongst architects who felt as though they were being taken advantage of. Following the weak response of the profession to an architectural competition organized by the CMHC and endorsed by the Royal Architectural Institute of Canada in 1946, the CMHC decided to adopt another method for gathering house plans. Around 1949, in a report entitled *Research and Educational Projects*, it had been discovered that only 50 percent of the competition's respondents were practicing architects. Because the architectural profession had largely ignored the CMHC's request to contribute designs for new houses on the cheap, Canada's national housing corporation claimed that it was better "to abandon this method of obtaining new ideas from the practicing profession" and "to undertake...research under direct CMHC responsibility." With no estab-

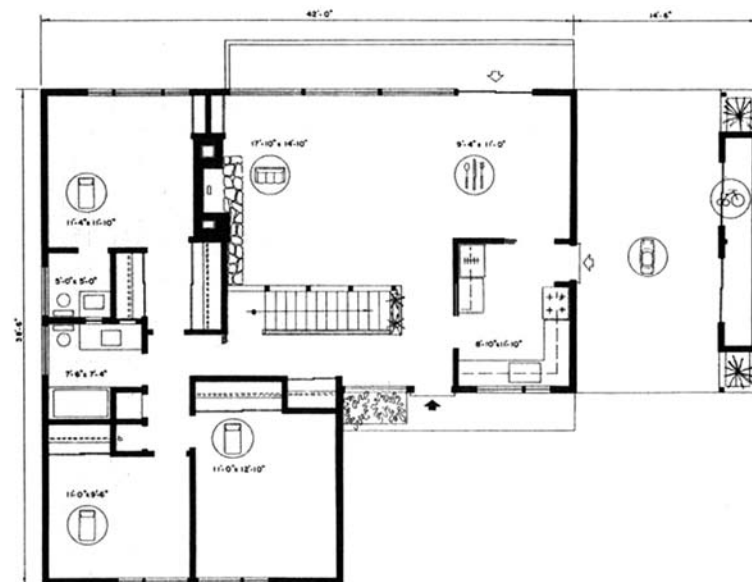
lished design guidelines in place, a Plan Selection Committee was set up in March 1950 and devised a process whereby only licensed Canadian architects were allowed to submit for consideration any number of house plans at their own discretion.

When enough sketches were gathered, the CMHC-led committee met and selected the winning schemes. Successful applicants were sent a letter of acceptance and an invitation to prepare working drawings that respected the building standards of the day. The Chief Plans Examiner of the CMHC Loans Division would develop a list of any needed changes when reviewing these drawings. Known as "preliminaries," the list of changes was sent back to the architect for modification and resubmission. When all the criteria were met, a contract was drawn up between the CMHC and the architect.

Well-known architects like Henry Fliess (Toronto), Ray Affleck (Montreal) or Gustavo da Roza (Winnipeg) had their plans included in the catalogues at a time when their practices were rapidly expanding. With impeccable graphic presentation, the residential catalogues offered an array of seemingly award-winning house designs. Nonetheless, remaining documents stored in the National Archives belie the overall success of the program. Countless letters from architects demanded to know why their designs were rejected. In response, the CMHC would simply state, "your design was not suitable for our purposes." Only very determined applicants received an answer from the CMHC when complaining about the lack of guidelines. The CMHC would often answer, "If we knew what we were looking for, we wouldn't be asking you!" While the National Archives in Ottawa hold all CMHC files dated between 1946 and 1987, many files



ELEVATION

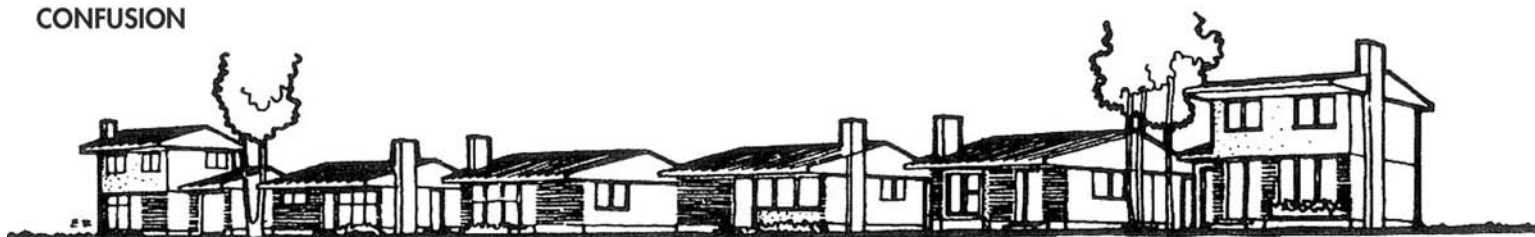


GROUND FLOOR

RIGHT SUITABLE FOR ALL THE TEMPERATE ZONES OF CANADA, SEVERAL HOUSING SCHEMES WERE MARKETED BY THE CMHC TO YOUNG HOMEBUYERS ACROSS THE COUNTRY, SUCH AS THIS VANCOUVER DESIGN #274/1957.



CONFUSION



HARMONY

prior to 1961 were destroyed by the CMHC for a lack of storage space—which makes it difficult to research our evolving postwar national housing policy.

According to Andrew Hazeland, former secretary of the Plan Selection Committee, its members didn't see themselves as "taste-makers" of the day. Most plans observed a rather similar segregation of day- and night-spaces specific to postwar residential design, and a few of the texts accompanying the successful drawings advise that the houses should "hug the ground" in an approach to site planning befitting middle-class acceptance. To complement their plan catalogues, CMHC publications like *Choosing a House Design* (1956) and *Principles of Small House Design* (1957) made strong suggestions as to the cardinal orientation of one's house or an appropriate relationship to the street front.

At the time, *Canadian Architect* magazine was among the very few voices which argued that the financial agreement of the scheme was unethical in accordance with most provincial legislation. As well, the editors commented

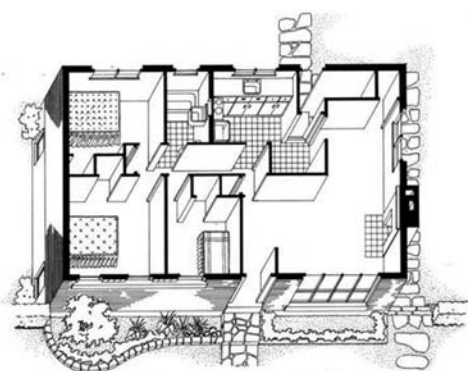
ABOVE CANADIAN ARCHITECT WAS ONE OF THE FEW PUBLICATIONS TO VOICE CONCERN OVER THE CMHC'S SMALL HOUSE DESIGN SCHEME WHICH, IN THEIR VIEW, WAS NOT ONLY TAKING ADVANTAGE OF ARCHITECTS' SERVICES, BUT PRODUCING DISHARMONIOUS RESIDENTIAL NEIGHBOURHOODS ACROSS CANADA. **BELOW LEFT** THE CMHC PRODUCED MANY DOCUMENTS TO HELP THE CANADIAN PUBLIC READ AND APPRECIATE RESIDENTIAL FLOOR PLANS. VISUAL AIDS INCLUDED RENDERED FLOOR PLANS, PERSPECTIVES, AND EXPLANATIONS OF DRAWING CONVENTIONS FOUND ON BLUEPRINTS.

that the scheme was producing an "abominable" hotchpotch of small houses instead of a "building-unit system which would allow each family to assemble its own house on its own lot—tailored to the existing site conditions and to the family's needs and future growth."

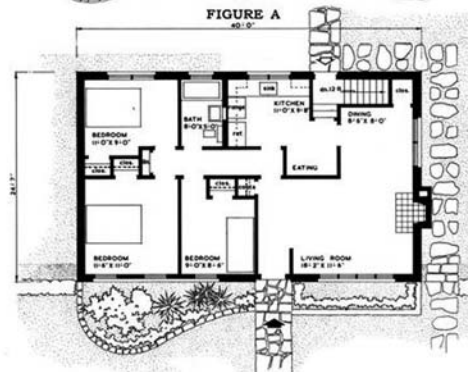
Although professional magazines would naturally promote architects' own houses and high-end designs, popular magazines focused on less sophisticated designs for the general public. For example, *Canadian Homes and Gardens* advanced a scheme called "Select Homes" which was similar to the CMHC catalogues at the time. In August 1954, *Canadian Home Journal* gave ample coverage to a competition titled Home '54. Similar to the CMHC Small House Design Scheme, this initiative was only interested in soliciting ideas from licensed Canadian architects.

Whether these separate programs were influenced by the CMHC Small House Design Scheme or vice versa is hardly relevant. The important point to remember is the drive of such schemes to produce and advertise affordable designs "suitable for all the temperate zones of Canada—from ocean to ocean." Interestingly, Home '54 also looked at plan flexibility: proposed designs submitted for this competition should have been modifiable to accommodate empty-nesters. In a time of economic crisis, it wouldn't be a bad idea for both professionals and homebuyers to consider revisiting the opportunity to develop new trends in single-family living, albeit using a system that is equitable to architects, government and future homebuyers. **CA**

Ioana Teodorescu is currently looking to interview architects who submitted drawings to the CMHC for the Small House Design Scheme during 1947-1974, as well as architects who produced house plans for developers and/or for other such schemes/competitions mentioned in this article during the same period. She is also interested to hear from builders who built houses from the CMHC catalogues. Ioana may be contacted by e-mail at ioana.teodorescu@mail.mcgill.ca or by telephone at 613.850.6016.



The house designs offered in this booklet are illustrated by floor plan sketches and by perspective drawings which are really pencil pictures of the houses as conceived by the architects. To understand the floor plan sketches, reference should be made to Figures A and B on this page and to the Floor Plan Symbols on Page 9.



The floor plan sketch represents a horizontal slice through the house. It is necessary to vary the level of the slice to show all important features, such as window and door openings and fireplaces. The slice is illustrated by the drawing, Figure A, which results in the floor plan sketch, Figure B.

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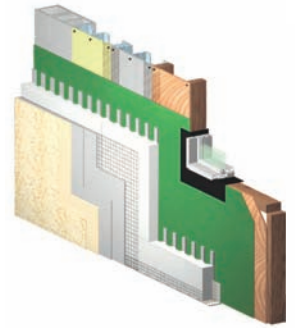
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CALENDAR

architecture e+c: work of elin + carmen corneil 1958 to 2008

April 30-July 17, 2009 This exhibition presents selected work from the practice of Elin and Carmen Corneil held by the Canadian Architectural Archive in Calgary, supplemented by documents from recent years, photographs, and nine models of components which underscore the exhibition's themes.

www.daniels.utoronto.ca

Frank Lloyd Wright: From Within Outward

May 15-August 23, 2009 Fifty years after the realization of Frank Lloyd Wright's renowned design, the Solomon R. Guggenheim Museum in New York celebrates the golden anniversary of its landmark building with this exhibition, bringing together 64 projects designed by one of the most influential architects of the 20th century, including privately commissioned residences, civic and government buildings, and religious and performance spaces, as well as unrealized urban mega-structures. www.guggenheim.org/new-york/exhibitions/upcoming/frank-lloyd-wright

10th World Congress on Art Deco

May 24-30, 2009 Art Déco Montréal hosts this event at McGill University's Moysey Hall. Throughout the Congress, guided tours will acquaint delegates with Montreal's Art Deco landmarks including the Montreal Botanical Gardens, Université de Montréal, Saint Joseph's Oratory, Aldred Building, Atwater Market

and Eaton's 9th Floor Restaurant and Lounge. Also, curators at the Montreal Museum of Fine Arts, the Canadian Centre for Architecture, the McGill University Library and the Université de Montréal will present exclusive tours and exhibitions of their private Art Deco collections. <http://artdecomontreal.com/congress/>

National Green Builders Products Expo

May 27-29, 2009 Taking place at the Las Vegas Convention Center, this is a business-to-business event geared to residential and commercial builders, developers, subcontractors, remodellers, architects, government planners, and plant and facility managers to find environmentally friendly products and services.

www.ngbpe.com

Art by Designers

May 27-30, 2009 The Association of Registered Interior Designers of Ontario (ARIDO) GTA Chapter presents the hidden artistic talents of designers at this exhibition at the Denison Gallery in Toronto, which launches with a gala on May 27, 2009.

www.denisongallery.com

Jeremy Sturgess lecture

May 28, 2009 Jeremy Sturgess of Sturgess Architecture in Calgary delivers this lecture at 6:00pm at the Nickle Arts Museum at the University of Calgary.

www.architecture.ca/causa/index.html



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Andreas Gursky: Werke/Works 80-08

May 30–September 20, 2009 Selected by Gursky himself from his substantial collection of photographic work, this landmark exhibition at the Vancouver Art Gallery consists of more than 130 artworks, presenting some of the most compelling images of our modern world. Gursky's towering ambition is to create an image-based "Encyclopedia of Life." Colossal German raves, crammed international trading floors, obsessively choreographed North Korean political rallies, high-tech production lines, multi-acre garbage heaps, rudimentary factory floors, cavernous ultramodern buildings, massive plots of land transformed by agriculture, kilometres of sunbathers on an Italian beachfront, discount stores and prize fights—Gursky captures countless settings, often emphasizing the individual human's insignificance relative to the built and natural environment.
www.vanartgallery.bc.ca

Transforming and Revitalizing Downtown Summit

June 2–3, 2009 This summit in Toronto features speakers such as Jan Gehl, Joe Berridge, Gil Penalosa, Robert Freedman, Brent Todarian, Bruce Kuwabara and Peter Clewes, who will discuss case studies from Helsinki, Copenhagen, Bogotá, Denver, Vancouver, Calgary, Portland, Moncton and Detroit. Geared to urban planners, architects and design-build firms, this event will help cities and municipalities develop downtown master plans that resonate with communities. Strategies will be discussed such as how to increase tax revenues, execute exceptional urban master plans, attract economic development and create a world-class destination.
www.strategyinstitute.com/060209-trds/dsp.php

National Disaster Reconstruction Expo

June 17–18, 2009 This event takes place at the Morial Convention

Center in New Orleans, Louisiana. The goal of the expo is to provide a forum for disaster professionals to work together before tragedy strikes; to offer an opportunity for disaster professionals to learn more about each other, how they affect each other, how they can rely on each other, and how they can work together to ensure loss of life and property resulting from the next catastrophic event are minimized.
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www.cdea.ca

The Works Art & Design Festival

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In addition to the seasonal artillery of backhoes, plows and mulchers, flood-prone cities like Winnipeg cannot do without the addition of its latest contraption. Even though it will sit dormant most of the year, and in some years may not be used at all, it is worth its weight in gold when the floodwaters rise.

This spring, the media was swamped with stories of Manitobans building sandbag walls along many of the province's swelling rivers. A combination of a heavy winter, ice jams and supersaturated soil caused rivers like the Red to rise to some of the highest levels on record. Over the last three years, the provincial government has been increasing the capacity of Winnipeg's diversion floodway in preparation for extreme conditions like this spring's flood. Despite these

efforts, sandbagging still plays a critical part in damage prevention.

On April 16, a state of emergency was announced in parts of Winnipeg where 600 volunteers were called out the following day to sandbag along parts of the Red River. And if that seems like a big number, consider this: when a flood of this magnitude recedes and the clean-up begins, local estimates have it that there will be a staggering 80 million kilograms of sand to be removed from Winnipeg's riverbanks. At approximately 16 kilograms per bag, that amounts to five million bags of sand, or seven bags for every Winnipegger. Considering the number of bags required, it is nearly impossible to picture the size of the volunteer army required to fill each of those bags by shovel.

While people better than me were out protecting neighbours' homes, I spent an afternoon with Guy Bergeron and his wife Ria. Bergeron is the inventor of the Sandbagger and is somewhat of a local hero. "Shovel by shovel, bag by bag. That's how they used to do it," Bergeron told me. At 79, he is supposed to be retired, but since 1997—six years after open heart surgery and selling his gravel-hauling business—he has been manufacturing and selling a 3.5-metre-tall collapsible, mobile contraption that can fill 5 to 6,000 bags of sand an hour. He made the first ones himself and now has them manufactured in a shop, but Guy and Ria insist on delivering the Sandbagger in person off the backs of their own trucks. When I met them, they had just returned from North Dakota.

Mounted permanently on a trailer, the Sandbagger arrives on location behind Bergeron's truck. Its flexibility and size enables it to be used inside a warehouse or on site, as long as a source of power and a conveyor crane are nearby. Within half an hour, two people can have the contraption unfolded and standing vertically on the trailer. Twelve steel chutes splay out from a funnel at the top that has a small rotating cowl to spread sand equally into the chutes. With the pace of the cowl properly adjusted, and the sizes of the openings accurately measured, the Sandbagger drops an exact amount of sand into each bag waiting at the bottom of the chute. One volunteer pulls the bag away to tie it up while another volunteer steps in with a fresh bag just in time to meet the full rotation. When you do the math and get all the volunteers in sync, the Sandbagger is filling 1.5 bags per second.

The made-in-Manitoba Sandbagger is about the cost of a mid-size automobile and has been sold all across North America. Flood-prone cities have learned that time is of the essence in a flood situation. The Bergerons believe that if speeding up the process relieves even one family of the emotional and physical damage caused by a house submerged in floodwater, the Sandbagger has paid for itself. **CA**

Peter Sampson is an architect in Winnipeg and teaches at the University of Manitoba.

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